Summary of
Cotton Fiber and Processing Test Results

CROP of 1973

U.S. DEPARTMENT OF AGRICULTURE
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CONTENTS

SUMMARY OF COTTON FIBER AND PROCESSING TEST RESULTS
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INTRODUCTION

This report contains information on the fiber properties and spinning performance of cotton from major commercial production areas of the United States. Similar reports have been published annually since 1946. 1/ These reports summarize and add supplemental information to the data published in biweekly reports which were titled "Cotton Fiber and Processing Test Results, Crop of 1973" and numbered 1 through 12.

The results of fiber and spinning tests made in connection with these annual surveys provide data for studies of the relationships between fiber properties, processing performance and product quality. The data are used to measure the effectiveness of the standards to be sure that they continue to reflect differences in spinning utility. Publication of the bi-weekly reports enables merchants and manufacturers to use the results to locate sources of cotton to meet their specific requirements. Farmers and breeders may also use the data as a source of quality information regarding the various varieties of cottons produced under commercial growing conditions.

SAMPLING PROCEDURES

The procedure for selecting samples for the 1973 survey was designed to provide test lots representing all major varieties in each of the territories served by Cotton Division classing offices. Variety selections were based on the predominant varieties planted in each classing office territory as reported by the Cotton Division in "Cotton Varieties Planted, 1969-1973". A production area was selected to represent the leading variety and one to represent each of the other varieties with an expected production of 10,000 bales or more in each classing office territory. Additional areas were selected for those varieties with a production of over 125,000 bales. One additional production area was selected for each 125,000 bales or portion thereof in excess of the first 125,000 bales. Production areas with at least 70 percent of one variety were designated as that variety with no attempt made to maintain the purity of the variety except by selection of representative production areas. However, in some cases, where there was unusual interest in a particular variety and a low percentage was planted in the area, the classing offices selected lots representing 100 percent of the variety. The locations of the 158 production areas selected for the 1973 survey are shown on figure 1.

1/ Copies of past summary reports may be obtained from the Standardization Section, Cotton Division, AMS, USDA, 4841 Summer Avenue, Memphis, Tennessee 38122 until supplies are exhausted.

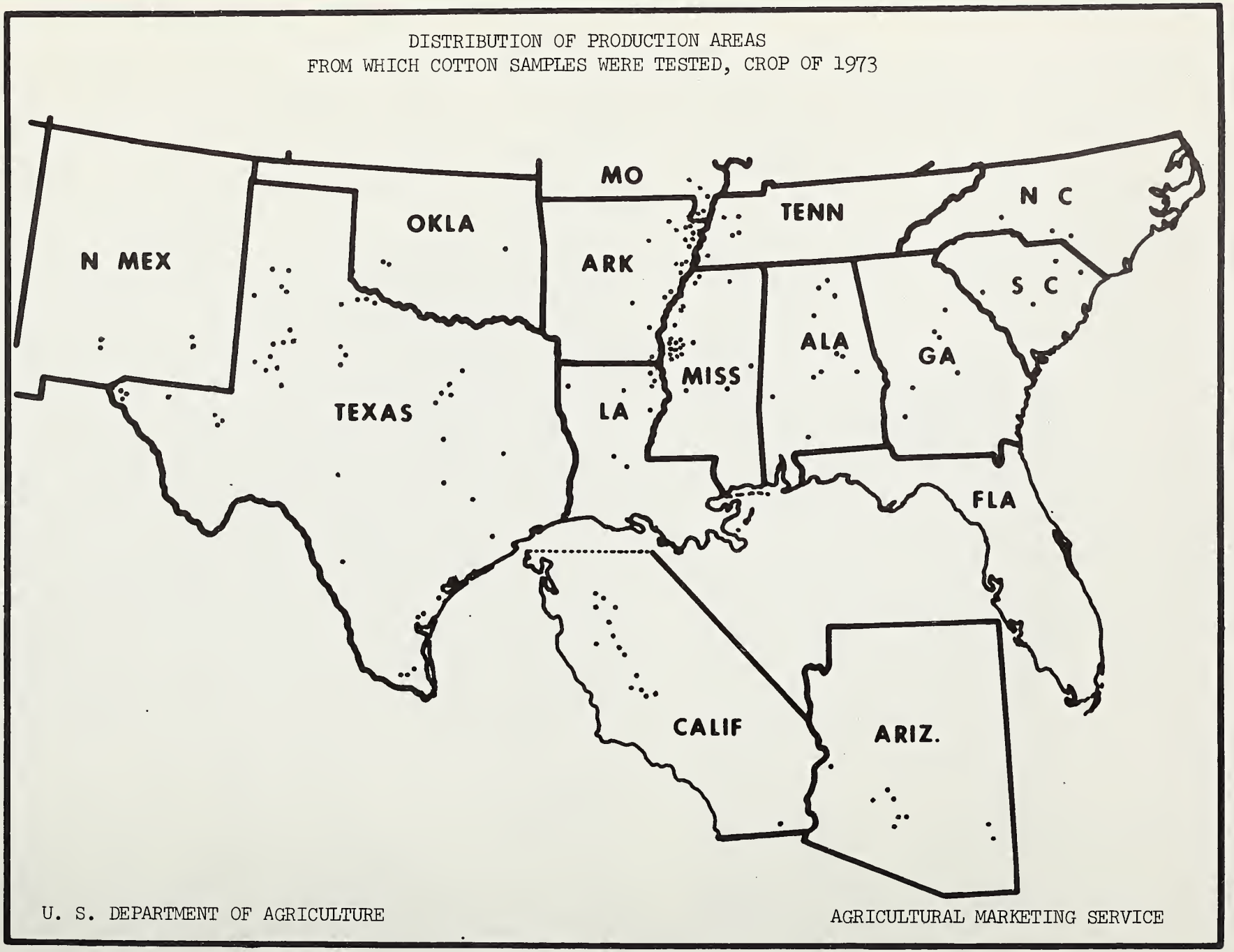


Figure 1. Location of production areas selected for the 1973 Survey.

Test lots were collected from each production area at intervals of three weeks during the harvest season. Lots were selected to represent the predominant grade and staple being classed at the time of collection. For the most part, these areas produce the specified qualities in quantities large enough to enable buyers to obtain lots of even-running grade and staple Obviously, other qualities of cotton are available in each area as a result of normal seasonal, soil, harvesting and other variations. Most production areas also produce cotton of varieties other than those included in the tests.

Each spinning lot used in this study was made up of 20 to 30 samples of the same grade and staple length from bales classed for growers under the Smith-Doxey Act. These even-running lots of samples were then tested at Cotton Division fiber and spinning laboratories. While this method of collecting samples does not provide data for all qualities in the crop, it does provide average test results for those qualities in largest supply during each three-week period.

LABORATORY PROCEDURES

Fiber, spinning, and chemical finishing tests were performed under standardized procedures at the Cotton Division spinning laboratory at Clemson, South Carolina. Most of the fiber tests were performed in the standard atmospheric conditions of 65 percent relative humidity at a temperature of 70 degrees F. Standard test procedures as outlined by the American Society for Testing and Materials were used in making tests. Tests not covered by ASTM were performed using commonly accepted procedures as recommended by the instrument manufacturer. Five subsamples were taken at random from each spinning lot to provide representative specimens for the fiber tests.

Yarn processing or spinning tests were performed by a technique developed in the Cotton Division laboratories for processing small lots of cotton on standard-type textile machines. The samples in each lot were thoroughly composited by hand-mixing before being fed to the first process picker. This hand-mixing is similar to the machine mixing normally obtained in cotton textile opening equipment. Observations were made at each process to measure processing behavior and the yarns produced were tested to measure product quality.

On the basis of average past performance, cottons were grouped according to the expected staple length for the specified variety. All cottons of the specified variety were spun in the same manner regardless of difference in staple length. This was done so that direct comparisons of different lots of cotton within a specified variety could be made. These samples were

carded at specified production rates and spun into numbers that reflect the manufacturing values of the varieties tested. In general, the rates of carding and yarn numbers spun from the 1973 crop are as follows:

Group 1.--Short staple cottons, carded at 12-1/2 pounds per hour and spun into carded 8s and 22s yarns with a twist multiplier of 4.40 plus a carded yarn spinning potential test for all lots. This includes varieties which normally produce staple lengths 31/32 and shorter.

Group 2.--Medium staple cottons, carded at 9-1/2 pounds per hour and spun into carded 22s and 50s yarns with a twist multiplier of 4.00 plus a carded yarn spinning potential test for all lots. This group includes varieties which normally produce cottons from 1 inch through 1-3/32 inches in staple length.

Group 3.--Long staple cottons, carded at 6-1/2 pounds per hour and spun into both carded and combed 22s and 50s yarns with a twist multiplier of 3.80 plus a carded yarn spinning potential test for all lots. This group includes upland varieties which normally produce cottons from 1-1/8 inches through 1-1/4 inches in staple length.

Group 4.--Extra long staple cottons, carded at 4-1/2 pounds per hour and spun into combed 50s and 80s yarns with a twist multiplier of 3.60. This group includes all American Pima and American upland extra long staple varieties, which are usually 1-5/16 inches or longer in staple length.

Skeins of yarn from each spinning test lot were bleached and dyed by a technique developed in the Cotton Division laboratories for small scale finishing tests. Color tests were made on gray and chemically finished skeins of yarn as measures of the bleaching and dyeing behavior.

TEST RESULTS

U. S. Average - Upland Cotton

American upland spinning lots tested from the 1973 crop totaled 456, which includes short, medium and long staple cottons. This compares with 435 lots from the 1972 crop. Average results showed the 1973 cottons to be slightly longer by the Fibrograph 2.5 percent span length, coarser and weaker at 1/8" gage fiber strength than the 1972 cottons. Picker and card waste was lower in 1973. Yarns spun from these samples were slightly weaker with lower appearance grades, but with fewer imperfections. Average spinning potential yarn number was lower than in 1972. (Table 1)

Group 1.--Short Staple Cottons

A total of 70 short staple American upland spinning lots was tested for the 1973 crop. This compares to 57 lots for the 1972 crop. Average results showed the 1973 cottons to be shorter, more uniform, much coarser and stronger at zero gage than the 1972 crop cottons. Both Shirley Analyzer nonlint content and picker and card waste were lower for 1973. Yarns spun from these samples were weaker with lower appearance grades. Yarn imperfections were fewer in 1973 than 1972. Average spinning potential yarn number was lower in 1973.

Group 2.--Medium Staple Cottons

A total of 346 medium staple American upland spinning lots was tested from the 1973 crop compared to only six less for the 1972 crop. Average results showed the 1973 cottons to be slightly longer, coarser and weaker at 1/8" gage strength than the 1972 cottons. Shirley Analyzer nonlint content was slightly higher while picker and card waste was lower for the 1973 crop. Yarns spun from these samples had lower appearance grades and a lower average spinning potential yarn number.

The Southeastern production area includes the states of Virginia, North Carolina, South Carolina, Georgia, Florida and Alabama. A total of 57 medium staple spinning lots was tested from this area in 1973 compared to 61 in 1972. Average results showed the 1973 cottons to be slightly more uniform, much coarser, slightly weaker at both zero gage and 1/8" gage strength than the 1972 cottons. Shirley Analyzer nonlint content was higher for the 1973 cottons while picker and card waste was a little lower. Yarns spun from these samples were weaker with better appearance grades, but had more imperfections than in 1972. Average spinning potential yarn number was lower.

The South Central production area includes the states of Tennessee, Missouri, Mississippi, Arkansas and Louisiana. A total of 167 medium staple spinning lots, one less than in 1972, was tested in 1973. Average results showed the 1973 cottons to be longer, coarser and weaker than the 1972 cottons. Shirley Analyzer nonlint content was a little higher but picker and card waste was lower for the 1973 crop. Yarns spun from these samples were slightly weaker with lower yarn appearance grades than the 1972 crop. Average spinning potential yarn number was lower.

The Southwestern production area consists of the states of Oklahoma and Texas except far west Texas (served by the Pecos and El Paso classing offices). A total of 54 medium staple American upland spinning lots was tested from the 1973 crop in this area compared to 51 from the 1972 crop. Average results from these medium staple samples show the 1973 cottons to be longer, more uniform, and coarser than the 1972 crop. Both Shirley Analyzer nonlint content and picker and card waste were lower. Yarns spun from these samples were weaker with much lower appearance grades than the 1972 crop. Yarn imperfections were lower in 1973 than in 1972. Average spinning potential yarn number was lower in 1973.

The Western production area consists of the states of California, Arizona, New Mexico and far west Texas. A total of 68 medium staple American upland spinning lots was tested from this area in 1973 compared to 60 in 1972. Average results from these medium staple samples show 1973 cottons to be a little longer, finer and stronger at both zero and 1/8" gage strength than the 1972 crop. Both Shirley Analyzer nonlint content and picker and card waste were lower. Yarns spun from these samples were stronger, but appearance grades were considerably lower than in 1972.

Group 3.--Long Staple Cottons

A total of 40 long staple American upland ginning lots were tested in 1973, two more than in 1972. Average results from these lots showed the 1973 cottons to be slightly shorter, more uniform, coarser and weaker at zero gage fiber strength than the 1972 crop cottons. Both Shirley Analyzer nonlint content and picker and card waste were higher. Yarns spun from these samples showed higher appearance grades and fewer imperfections than in 1972. Average spinning potential yarn number was lower.

A total of 18 long staple American upland spinning lots from the Southeastern area was tested in 1973 compared to 19 lots in 1972. Average fiber test results showed the 1973 cottons to be more uniform, much coarser and weaker than in 1972. Both Shirley Analyzer and picker and card waste were higher in 1973 cottons. Yarns spun from these samples were weaker with much better appearance grades. Yarn imperfections were fewer than in 1972. Average spinning potential yarn number was lower.

Seven long staple American upland spinning lots were tested from the South Central Area in 1973 compared to four in 1972. Average results showed the 1973 cottons to be shorter, much coarser and weaker at zero gage strength than the 1972 cottons. Yarns spun from these samples were weaker with better appearance grades than in 1972. Average spinning potential number was lower in 1973.

A total of 15 long staple American upland spinning lots from the Western Area in 1973 compared to a like number of lots in 1972. Average results from these lots show the 1973 cottons to be shorter, a little more uniform and stronger at 1/8" gage fiber strength than the 1972 crop. Both Shirley Analyzer nonlint content and picker and card waste were higher. Yarns spun from these samples were stronger with better appearance grades and fewer imperfections than in 1972. Average spinning potential yarn number was higher in 1973.

Group 4.--Extra Long Staple Cottons

A total of 20 extra long staple American Pima spinning lots was tested from the Western Area in 1973 compared to 21 lots in 1972. Average results showed

the 1973 extra long staple cottons to be longer, slightly more uniform, coarser and much stronger than the 1972 cottons. Shirley Analyzer waste, picker and card waste, and comber waste were higher. Yarns spun from these samples were stronger with better appearance grades and fewer imperfections in 1973.

Table 1.--Cotton: Average results of classification, fiber and processing tests from selected gin points, crops of 1972 and 1973 1/

Area and Crop Year	Lots tested	Grade	Staple	Fiber test results						Processing test results				
				Fibrograph		Mike	Strength		Shirley Analyzer non-lint	Picker & Card Waste	Skein strength 22s	Appearance 22s	Yarn imperf. 22s	Spin. Potent.
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage						
	No.	Index	32d in	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	No.
SHORT STAPLE - American upland														
Southwest														
1972	57	89	31.3	0.97	45	4.1	79	21	3.7	6.8	94	116	29	46
1973	70	93	30.9	0.96	46	4.4	82	21	3.3	6.3	91	108	16	42
MEDIUM STAPLE - American upland														
Southeast														
1972	61	88	34.1	1.08	45	4.3	83	23	3.0	6.2	104	104	16	66
1973	57	90	34.1	1.08	46	4.5	82	22	3.6	6.0	101	105	21	61
South Central														
1972	168	90	34.4	1.08	45	4.3	84	23	2.9	6.1	102	109	19	63
1973	167	92	34.4	1.10	45	4.5	81	22	3.1	5.8	101	107	19	61
Southwest														
1972	51	90	33.4	1.06	44	4.1	82	22	3.5	6.6	101	115	28	60
1973	54	93	33.4	1.07	45	4.3	82	22	3.1	5.8	98	97	22	56
West														
1972	60	95	34.8	1.09	45	4.4	90	24	2.6	5.5	110	121	17	66
1973	68	98	35.1	1.10	45	4.3	91	25	2.4	5.2	116	101	17	66
Average														
1972	340	90	34.3	1.08	45	4.3	84	23	3.0	6.1	104	111	20	64
1973	346	93	34.4	1.09	45	4.4	84	22	3.1	5.7	104	104	20	61

1/ Based on a limited number of samples of modal quality

Table 1.--Continued

Area and Crop Year	Lots tested	Grade	Staple	Fiber test results						Processing test results				
				Fibrograph		Mike	Strength		Shirley Analyzer non-lint	Picker & Card Waste	Skein strength 22s	Appearance 22s	Yarn imperf. 22s	Spin. Potent.
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage						
	No.	Index	32d in	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	No.
LONG STAPLE - American upland														
Southeast														
1972	19	88	34.6	1.12	43	4.3	85	24	3.6	8.5	106	102	24	68
1973	18	88	34.3	1.12	45	4.6	81	23	3.9	8.7	103	117	14	65
South Central														
1972	4	87	36.8	1.16	44	4.0	88	24	4.2	8.8	116	100	20	75
1973	7	90	35.3	1.14	44	4.3	85	24	4.3	8.8	108	114	20	64
West														
1972	15	96	36.7	1.17	44	3.6	91	25	2.5	7.2	126	91	26	86
1973	15	98	36.2	1.15	45	3.6	91	27	2.7	7.6	132	95	19	88
Average														
1972	38	91	35.7	1.14	44	4.0	88	24	3.3	8.0	115	97	24	76
1973	40	92	35.2	1.13	45	4.2	86	24	3.5	8.3	115	108	17	74
U. S. UPLAND AVG.														
1972	435	90	34.0	1.07	45	4.2	84	23	3.1	6.4	104	111	21	62
1973	456	93	33.9	1.08	45	4.4	84	22	3.1	6.0	103	105	19	60
EXTRA LONG STAPLE - American Pima														
West				Array							50's Combed Yarn			Comber Waste
1972	21	4	44.0	1.44	32	3.6	97	32	2.7	7.9	63	113	3	17.7
1973	20	3	44.0	1.46	31	3.7	101	34	3.4	8.1	67	118	1	18.4

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1972 and 1973

	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
SOUTHEAST	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
Medium staple:															
Alabama															
1972	30	88	33.9	1.09	44	4.3	82	22	7.2	2.6	3	3	94	5.8	64
1973	30	90	34.0	1.07	46	4.5	82	22	7.0	3.3	2	3	96	5.6	61
Georgia															
1972	17	90	33.8	1.06	45	4.4	85	23	6.6	3.0	3	3	95	6.1	65
1973	12	88	33.8	1.08	45	4.5	83	22	6.6	3.7	3	3	94	5.8	58
North Carolina															
1972	4	87	35.0	1.10	46	4.0	81	24	7.6	4.3	3	2	93	7.8	70
1973	6	91	34.8	1.08	46	4.6	83	23	6.6	4.4	3	3	96	7.2	61
South Carolina															
1972	10	88	34.9	1.11	46	4.0	85	24	6.9	3.8	2	3	95	6.7	72
1973	9	88	34.6	1.10	46	4.6	81	22	6.6	4.3	3	3	95	6.6	65
Long staple:															
Alabama															
1972	6	87	34.2	1.07	43	4.2	85	24	6.7	3.3	3	3	92	9.0	62
1973	7	88	33.9	1.11	44	4.4	80	22	7.4	3.8	3	3	95	8.8	61
Georgia															
1972	7	90	34.7	1.12	44	4.6	86	24	6.8	3.6	3	3	93	8.3	66
1973	6	90	34.2	1.12	45	4.8	82	23	6.7	3.5	3	4	92	8.4	62
North Carolina															
1972	2	92	35.0	1.16	44	4.5	85	24	7.6	2.9	2	4	97	7.6	76
1973	2	90	35.0	1.12	46	4.6	86	24	6.5	4.0	2	3	95	8.3	76
South Carolina															
1972	4	85	35.0	1.15	42	4.0	84	24	7.4	4.4	3	3	95	9.1	76
1973	3	85	35.0	1.16	44	4.4	80	23	6.7	5.0	3	3	94	9.2	73
SOUTH CENTRAL															
Medium staple:															
Arkansas															
1972	47	88	34.2	1.08	45	4.4	85	23	6.8	3.3	3	2	90	6.2	61
1973	55	93	34.5	1.10	45	4.5	82	22	7.2	3.2	2	3	98	5.9	62
Louisiana															
1972	22	91	34.5	1.09	45	4.3	83	23	6.9	2.7	3	3	94	5.7	60
1973	24	91	34.4	1.10	45	4.6	79	22	7.4	2.9	3	3	94	5.5	60
Mississippi															
1972	64	90	34.6	1.09	44	4.3	85	23	7.3	2.9	2	3	97	6.3	67
1973	61	91	34.6	1.11	45	4.5	82	22	7.2	3.4	2	2	97	6.0	63
Missouri															
1972	13	90	33.8	1.06	44	3.9	79	21	7.5	2.4	3	3	94	6.1	62
1973	15	94	34.1	1.07	45	4.4	82	21	6.9	2.7	2	3	99	5.3	57
Tennessee															
1972	22	90	34.0	1.06	44	4.1	80	21	7.3	2.4	3	3	95	5.9	63
1973	12	94	33.8	1.06	46	4.6	81	21	7.1	2.6	2	3	98	5.3	58

Table 2.--Continued

Area state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
			50's		50's		50's		50's						
SOUTHEAST															
Medium staple:															
Alabama															
1972	30	101	35	6.3	4.7	102	79	17	13	83.5	3.7	99	27.9	26.2	103
1973	30	101	32	6.5	4.7	108	84	18	14	82.5	3.5	97	29.1	25.3	97
Georgia															
1972	17	103	35	6.2	4.6	108	84	14	12	83.5	3.7	99	28.0	26.2	103
1973	12	98	31	6.1	4.3	100	77	26	20	82.1	3.7	96	29.5	24.9	94
North Carolina															
1972	4	112	40	6.6	5.2	100	85	19	14	83.0	3.1	100	27.1	26.5	106
1973	6	107	34	6.4	4.5	105	82	24	17	82.3	3.6	97	28.7	25.6	99
South Carolina															
1972	10	114	42	6.7	5.2	102	80	18	15	84.4	3.4	102	27.0	26.7	107
1973	9	102	34	6.3	4.5	102	82	23	17	82.5	3.4	98	28.7	25.6	99
Long staple:															
Alabama															
1972	6	98	32	6.0	4.5	105	80	18	15	84.9	3.4	103	28.3	26.3	102
1973	7	100	32	6.4	4.7	116	91	14	11	83.3	3.3	100	28.5	25.1	97
Georgia															
1972	7	107	39	6.1	4.7	104	86	28	15	83.1	4.1	96	27.6	25.9	103
1973	6	103	31	6.2	4.5	120	90	14	10	82.4	3.8	96	28.9	25.4	98
North Carolina															
1972	2	114	44	6.6	5.4	105	90	23	15	84.1	4.3	98	26.3	27.0	110
1973	2	111	37	6.5	4.6	120	95	12	10	83.1	3.4	99	28.7	25.0	97
South Carolina															
1972	4	114	42	6.6	5.4	92	78	24	13	84.1	3.2	102	27.2	26.8	106
1973	3	104	35	6.2	4.9	110	87	17	15	82.6	3.2	98	29.1	25.5	98
SOUTH CENTRAL															
Medium staple:															
Arkansas															
1972	47	102	36	5.8	4.4	121	95	18	13	83.4	3.2	101	27.7	26.2	103
1973	55	103	33	6.5	4.6	106	82	19	15	82.4	3.3	98	28.5	25.6	99
Louisiana															
1972	22	101	37	6.0	4.6	121	92	20	14	84.3	2.9	104	27.9	26.6	105
1973	24	96	31	6.4	4.5	102	79	23	18	82.7	3.3	99	28.6	25.7	100
Mississippi															
1972	64	106	37	6.5	4.8	102	79	19	15	84.4	2.9	104	27.3	27.0	107
1973	61	103	33	6.6	4.7	108	81	18	14	82.4	3.3	98	28.9	25.4	98
Missouri															
1972	13	98	33	6.6	4.9	95	69	23	20	83.7	3.2	102	27.3	26.6	106
1973	15	97	30	6.5	4.6	103	80	21	15	82.6	3.3	98	28.3	25.7	100
Tennessee															
1972	22	97	33	6.4	4.7	103	79	19	14	83.9	3.5	101	27.3	26.6	106
1973	12	95	30	6.3	4.6	112	90	14	12	82.0	3.4	96	28.1	25.5	100

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1972 and 1973--Continued

Area state and crop year	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
SOUTH CENTRAL (Continued)	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
Long staple:															
Mississippi															
1972	4	87	36.8	1.16	44	4.0	88	24	6.5	4.3	3	2	95	9.1	75
1973	4	87	36.2	1.18	44	4.2	86	24	6.4	5.5	2	2	94	9.4	68
SOUTHWEST															
Short staple:															
South Texas															
1972	3	89	31.3	0.94	44	4.6	77	20	7.2	3.2	4	4	91	6.7	45
1973	2	87	31.0	0.97	48	4.2	71	19	6.6	4.8	4	3	87	6.2	43
Central Texas															
1972	15	94	31.3	0.98	45	4.4	86	20	6.7	2.9	3	4	96	5.7	47
1973	18	88	31.7	1.01	46	4.6	85	21	6.3	3.7	3	3	91	6.6	45
Northwest Texas															
1972	33	88	31.3	0.98	45	3.9	77	21	7.0	3.9	3	4	92	7.0	45
1973	44	95	30.6	0.95	46	4.3	82	21	6.9	3.1	2	3	99	6.2	41
Oklahoma															
1972	3	93	32.0	0.97	45	4.5	80	20	7.0	2.9	3	3	94	5.9	46
1973	6	96	31.2	0.96	46	4.6	78	20	7.4	2.8	2	3	99	5.5	42
Medium staple:															
South Texas															
1972	18	91	33.7	1.06	46	4.4	84	22	6.2	3.1	2	3	95	6.2	63
1973	15	92	33.9	1.08	45	4.5	80	21	6.0	2.5	3	3	95	5.5	60
Central Texas															
1972	9	93	34.1	1.09	45	4.6	84	22	6.8	2.6	2	3	96	5.7	62
1973	15	89	33.9	1.07	45	4.2	82	21	6.5	3.3	3	3	92	6.1	58
Northwest Texas															
1972	21	89	32.8	1.04	43	3.6	80	22	6.7	4.2	3	3	96	7.5	55
1973	21	96	32.3	1.03	45	4.2	83	22	6.7	3.2	2	3	100	5.8	51
Oklahoma															
1972	3	85	34.0	1.11	45	4.7	83	24	7.1	4.0	4	3	88	6.4	64
1973	3	94	36.0	1.17	46	4.4	80	23	8.1	3.6	2	2	99	5.3	72
WEST															
Medium staple:															
Arizona															
1972	15	94	34.4	1.09	44	4.5	84	23	7.0	2.7	2	2	96	5.6	57
1973	17	100	34.8	1.10	44	4.6	86	23	6.9	2.4	0	3	105	5.3	55
California															
1972	36	96	35.3	1.10	46	4.4	95	26	5.6	2.5	2	3	98	5.4	71
1973	45	97	35.4	1.11	46	4.3	95	26	5.7	2.3	1	3	101	5.2	72
West Texas															
1972	9	93	33.4	1.07	44	4.0	78	21	7.5	3.1	3	3	95	6.0	56
1973	6	100	34.0	1.07	43	3.8	80	22	7.8	2.4	0	3	106	5.1	59

Table 2.--Continued

Area state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL (Continued)															
Long staple:			50's		50's		50's		50's						
Mississippi															
1972	4	116	43	6.0	4.9	100	75	20	14	84.1	3.0	103	27.4	27.0	107
1973	4	116	39	6.3	4.8	110	88	22	16	83.3	3.3	100	29.9	24.8	93
SOUTHWEST															
Short staple:			8's		8's		8's		8's						
South Texas															
1972	3	85	284	6.4	7.4	110	123	34	52	86.0	3.4	106	26.1	27.4	111
1973	2	90	288	7.0	8.2	95	125	28	35	83.8	3.7	100	29.9	25.8	98
Central Texas															
1972	15	96	312	6.0	7.0	121	125	19	33	85.1	3.5	103	27.1	26.8	107
1973	18	97	303	6.5	7.4	112	126	19	23	83.2	3.7	98	29.8	25.3	95
Northwest Texas															
1972	33	93	305	6.4	7.7	115	120	31	51	83.6	4.0	98	26.7	26.5	107
1973	44	89	288	6.5	7.8	107	123	15	19	82.2	3.8	95	28.9	25.5	98
Oklahoma															
1972	3	94	310	6.2	7.4	123	130	16	28	83.1	3.6	98	27.0	27.0	108
1973	6	88	280	6.7	8.2	112	123	12	14	82.6	4.0	96	28.8	25.9	100
Medium staple:			50's		50's		50's		50's						
South Texas															
1972	18	103	38	6.3	5.1	120	96	22	17	85.9	3.3	106	27.0	26.9	108
1973	15	98	32	5.9	4.2	98	77	24	18	83.7	3.4	101	29.8	26.0	98
Central Texas															
1972	9	101	36	6.0	4.7	122	93	20	16	85.0	3.1	105	27.0	26.9	108
1973	15	99	32	6.1	4.3	99	75	27	21	82.9	3.5	98	29.9	25.0	94
Northwest Texas															
1972	21	97	36	6.5	4.9	107	83	39	30	84.4	3.5	102	27.0	26.6	106
1973	21	97	29	6.3	4.6	93	76	19	15	82.0	3.8	95	28.9	25.4	98
Oklahoma															
1972	3	106	38	6.3	4.7	127	97	15	9	82.9	3.0	100	28.0	26.1	103
1973	3	108	36	7.3	5.2	100	83	14	12	83.3	3.5	99	27.8	26.1	103
WEST															
Medium staple:															
Arizona															
1972	15	99	35	5.9	4.4	121	92	16	12	85.0	2.8	106	27.6	26.6	105
1973	17	102	32	6.3	4.6	107	82	15	12	83.0	3.1	100	28.1	26.4	103
California															
1972	36	120	47	5.6	4.4	123	97	15	11	83.9	3.0	102	26.7	26.7	108
1973	45	123	42	6.0	4.5	100	77	17	13	82.1	3.5	97	28.5	25.2	98
West Texas															
1972	9	92	33	6.3	4.8	114	87	28	21	85.1	3.5	104	27.3	26.5	105
1973	6	103	32	7.2	5.2	95	75	18	15	83.9	3.4	101	27.9	25.8	102

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1972 and 1973--Continued

Area state and crop year	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
WEST (Continued)															
Long staple:															
New Mexico															
1972	9	96	36.9	1.18	44	3.6	89	25	6.4	2.5	1	3	102	7.1	88
1973	9	99	36.3	1.16	45	3.6	93	27	6.3	2.4	1	3	104	7.2	91
West Texas															
1972	6	95	36.5	1.16	44	3.7	92	25	6.3	2.6	2	3	100	7.5	83
1973	6	97	36.0	1.12	44	3.5	88	26	6.4	3.1	1	3	104	8.1	84

Table 2.--Continued

Area state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
WEST (Continued)															
Long staple:															
New Mexico															
1972	9	128	52	6.4	5.4	88	69	26	20	84.8	3.1	104	27.0	26.5	106
1973	9	136	48	6.5	4.9	93	78	18	15	83.2	3.4	99	27.9	25.0	98
West Texas															
1972	6	124	47	6.2	4.9	95	73	27	18	84.0	3.0	103	27.1	26.4	106
1973	6	128	44	6.6	4.9	97	78	20	14	83.5	3.5	100	28.0	25.5	100

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1973

Staple group, area, grade and staple			Spinning lots tested	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
Name	Code	32d in.	No.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
SHORT STAPLE GROUP															
Southwest															
M	31	29	3	.87	47	4.5	85	19	6.4	2.5	1	3	102	6.8	33
		30	5	.91	46	4.4	83	20	6.5	2.8	1	3	102	5.7	35
M Lt Sp	32	30	6	.92	46	4.0	83	21	6.6	3.5	2	4	99	5.9	38
		31	4	.98	46	4.5	80	21	7.4	2.6	2	4	98	5.4	44
		32	3	.98	46	4.5	77	21	7.3	3.2	2	4	97	5.4	45
SLM	41	31	7	.97	46	4.4	81	21	6.9	3.4	2	3	99	6.0	47
		32	8	1.00	46	4.4	80	21	7.0	3.1	2	3	99	6.2	48
SLM Lt Sp	42	31	7	.99	45	4.7	84	20	6.8	2.9	3	3	93	6.5	43
LM	51	32	3	1.01	47	4.5	83	21	6.2	4.3	4	3	91	6.7	44
LM Lt Sp	52	31	4	1.00	46	4.2	78	20	7.2	4.2	4	3	88	7.5	43
MEDIUM STAPLE GROUP															
Southeast															
SLM	41	33	5	1.02	46	4.7	82	22	7.2	3.1	2	3	98	5.4	53
		34	13	1.07	45	4.6	83	22	6.9	2.8	2	3	98	5.4	59
		35	12	1.11	46	4.5	83	23	6.5	3.1	2	3	98	5.6	67
LM	51	33	5	1.06	46	4.6	80	21	7.3	3.6	3	3	94	5.6	54
		34	11	1.08	46	4.6	79	21	7.1	4.0	3	2	93	6.7	61
		35	6	1.10	46	4.2	81	23	6.6	5.2	3	2	94	7.3	67
South Central															
M	31	34	6	1.08	46	4.8	84	22	7.1	1.9	2	3	100	4.7	60
SLM	41	34	56	1.08	45	4.6	82	22	6.9	2.9	2	3	98	5.6	58
		35	55	1.12	45	4.5	82	22	7.4	3.1	2	2	99	5.6	65
		36	4	1.14	44	4.2	79	21	8.2	2.7	2	2	100	5.5	68
SLM Lt Sp	42	34	5	1.08	44	4.3	80	21	7.4	2.6	3	3	96	5.6	60
LM	51	34	23	1.09	45	4.4	81	21	7.0	4.0	3	3	92	6.6	59
		35	11	1.12	45	4.1	80	22	7.4	4.6	3	2	94	6.7	62

Table 3.--Continued

Staple group, area, grade and staple			Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
				22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
Name	Code	32d in.	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SHORT STAPLE GROUP																	
Southwest					8s		8s		8s		8s						
M	31	29	3	82	265	5.5	7.3	103	123	9	10	82.1	3.4	97	28.6	25.1	97
		30	5	85	278	6.1	7.4	116	126	13	16	82.1	3.7	96	29.0	25.5	98
M Lt Sp	32	30	6	87	288	6.2	7.6	108	123	15	18	82.4	3.9	96	28.8	25.5	98
		31	4	89	284	6.8	8.0	108	120	13	18	82.1	4.2	94	28.5	26.0	101
		32	3	90	289	6.7	8.1	107	120	21	27	83.4	4.0	98	29.1	26.2	101
SLM	41	31	7	93	298	6.9	8.2	100	123	18	23	82.5	3.9	96	29.2	25.8	99
		32	8	95	304	7.0	8.2	111	124	14	18	82.7	3.8	97	29.1	25.6	98
SLM Lt Sp	42	31	7	90	289	6.3	7.3	113	127	16	21	81.8	4.0	94	29.4	25.0	95
LM	51	32	3	98	308	6.6	7.5	117	130	19	25	83.9	3.6	100	29.6	24.9	94
LM Lt Sp	52	31	4	89	281	6.6	7.7	100	125	25	28	83.0	3.8	98	30.1	25.2	94
MEDIUM STAPLE GROUP																	
Southeast					50s		50s		50s		50s						
SLM	41	33	5	93	27	6.4	4.5	114	84	17	12	82.0	3.3	97	29.5	25.4	97
		34	13	100	31	6.4	4.5	107	83	18	14	82.5	3.4	98	28.9	25.0	96
		35	12	111	38	6.5	4.7	108	84	19	15	82.6	3.6	97	29.2	24.9	95
LM	51	33	5	93	28	6.5	4.6	102	78	22	17	82.0	3.4	96	29.0	25.9	100
		34	11	97	30	6.4	4.5	105	83	21	16	82.5	3.4	98	28.9	25.8	99
		35	6	110	38	6.4	4.8	88	73	34	25	82.7	3.7	97	29.0	25.8	100
South Central																	
M	31	34	6	102	33	6.4	4.6	123	92	13	9	82.0	3.4	97	28.2	25.6	100
SLM	41	34	56	98	30	6.4	4.5	108	83	19	14	82.6	3.2	98	28.7	25.7	99
		35	55	107	35	6.7	4.9	108	84	19	14	82.4	3.2	98	28.4	25.5	99
		36	4	107	36	7.2	5.1	108	82	14	10	83.5	3.2	101	28.6	25.5	99
SLM Lt Sp	42	34	5	96	30	6.5	4.4	112	84	14	11	82.3	3.4	97	28.7	25.7	100
LM	51	34	23	97	30	6.3	4.4	102	79	21	17	82.2	3.4	97	28.8	25.4	98
		35	11	102	32	6.7	4.8	95	70	25	20	82.3	3.4	97	29.1	25.1	96

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1973--(Continued)

Staple group, area, grade and staple			Spinning lots tested	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
Name	Code	32d in.	No.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
MEDIUM STAPLE GROUP (Continued)															
Southwest															
M	31	32	4	1.02	46	3.8	83	22	6.9	2.7	1	3	103	4.7	53
SLM	41	33	4	1.05	46	4.2	84	23	6.3	2.9	2	3	99	6.1	60
		34	11	1.08	45	4.5	84	22	6.1	2.6	2	3	98	5.3	58
		35	4	1.12	45	3.9	80	22	6.5	2.8	2	3	97	5.2	71
		36	3	1.17	46	4.4	80	23	8.1	3.6	2	2	99	5.3	72
SLM Lt Sp	42	33	4	1.07	45	4.5	79	22	6.7	3.7	4	3	92	6.2	54
		34	6	1.08	46	4.7	82	22	6.0	2.9	4	4	90	6.0	57
West															
M	31	34	9	1.07	43	4.0	82	22	7.6	2.5	0	3	105	5.4	53
		35	29	1.11	45	4.5	92	25	6.1	2.1	1	3	104	5.1	65
		36	3	1.12	47	4.6	98	27	5.6	2.0	1	3	104	4.5	72
SLM	41	35	8	1.10	45	4.0	94	26	5.6	2.8	2	3	99	5.7	71
		36	14	1.12	46	3.9	95	26	5.7	2.5	2	3	99	5.0	77
LONG STAPLE GROUP															
Southeast															
SLM Lt Sp	42	34	5	1.11	45	4.8	81	23	6.7	3.7	3	4	93	8.7	59
LM	51	34	5	1.10	45	4.4	79	22	7.7	4.5	3	3	94	9.4	63
		35	4	1.15	45	4.4	82	24	6.7	5.1	3	3	93	9.1	75
South Central															
SLM	41	34	3	1.09	44	4.4	84	23	6.8	2.7	2	3	99	8.0	59
LM	51	36	3	1.18	43	4.0	85	24	6.4	5.8	3	2	93	9.6	68
West															
M	31	36	8	1.14	44	3.6	91	26	6.2	2.6	0	3	104	7.6	86

Table 3.--Continued

Staple group, area, grade and staple			Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
				22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
Name	Code	32d in.	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
MEDIUM STAPLE (Continued)																	
Southwest																	
M	31	32	4	100	30	6.6	4.8	100	82	18	12	82.5	3.7	96	29.2	25.1	96
SLM	41	33	4	105	34	6.5	4.6	92	78	16	15	82.4	3.8	96	29.4	25.8	98
		34	11	100	32	5.9	4.2	95	75	23	18	83.2	3.5	99	29.7	25.6	97
		35	4	110	40	6.8	4.8	98	75	26	18	82.9	3.4	98	29.1	25.4	98
		36	3	108	36	7.3	5.2	100	83	14	12	83.3	3.5	99	27.8	26.1	103
SLM Lt Sp	42	33	4	96	29	6.2	4.2	95	75	17	12	82.2	3.6	96	29.1	25.0	96
		34	6	95	30	5.7	4.0	103	82	25	19	83.6	3.4	100	29.8	25.8	98
West																	
M	31	34	9	99	30	6.8	4.9	94	76	17	15	83.7	3.2	101	28.2	26.5	103
		35	29	115	38	6.1	4.5	105	81	16	12	82.5	3.3	98	28.3	25.5	99
		36	3	127	44	6.0	4.6	107	80	17	13	81.5	3.3	96	28.2	26.0	102
SLM	41	35	8	121	41	5.9	4.4	92	71	20	15	82.2	3.5	97	28.8	25.2	97
		36	14	126	44	6.1	4.6	97	76	16	12	82.0	3.6	96	28.4	25.1	97
LONG STAPLE GROUP																	
Southeast																	
SLM Lt Sp	42	34	5	102	30	6.1	4.5	118	88	14	10	82.2	3.8	95	29.0	25.4	98
LM	51	34	5	99	32	6.5	4.9	116	94	15	11	83.6	3.2	101	28.5	25.3	98
		35	4	108	36	6.4	4.9	110	88	17	14	82.8	3.3	98	29.0	25.1	96
South Central																	
SLM	41	34	3	98	30	6.0	4.3	120	93	17	10	82.8	3.7	97	28.4	25.3	98
LM	51	36	3	115	38	6.4	4.8	103	83	25	18	83.4	3.3	100	29.3	24.5	93
West																	
M	31	36	8	131	45	6.5	4.8	94	79	19	16	83.3	3.4	99	28.0	25.5	100

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1973

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Gray-ness	Yellow-ness	Com-posite		
SHORT STAPLE	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
Lankart 57															
Oklahoma	3	97	31.0	0.96	46	4.5	77	20	7.6	2.1	2	3	99	4.9	41
Lankart LX-571															
Central Texas	3	86	31.3	1.00	45	4.6	86	20	6.5	3.4	4	3	87	7.3	43
Northwest Texas	9	92	31.7	1.00	46	4.8	81	21	6.9	2.9	2	3	97	6.1	45
Lankart 611															
Northwest Texas	3	92	30.7	0.95	46	4.3	80	20	8.3	2.7	2	3	99	6.0	44
Paymaster 18															
Northwest Texas	3	100	29.7	0.88	47	4.7	81	19	6.6	2.8	1	3	101	5.8	32
Paymaster 202															
Northwest Texas	3	99	29.7	0.90	45	3.7	88	21	6.0	3.1	1	3	102	6.6	38
MEDIUM STAPLE															
Acala SJ-1															
California	33	97	35.4	1.11	46	4.3	96	26	5.6	2.3	1	3	101	5.1	72
Acala SJ-2															
California	3	98	35.0	1.11	46	4.3	93	26	5.9	2.0	1	3	103	5.2	73
Auburn M															
Missouri	3	92	34.0	1.08	44	3.9	78	20	7.1	3.0	2	3	97	5.6	58
Brycot #4															
Arkansas	3	94	34.3	1.08	44	4.0	86	21	6.2	2.9	2	3	98	6.1	60
Coker 201															
Georgia	3	91	34.0	1.09	44	4.5	84	22	6.5	2.6	2	3	96	5.7	57
North Carolina	3	94	34.7	1.06	46	4.6	85	23	6.3	3.5	3	3	96	6.6	58
South Carolina	6	86	34.3	1.09	46	4.5	82	22	6.4	4.9	3	3	93	7.3	64
Coker 417															
Alabama	4	92	35.0	1.11	46	3.8	86	25	6.1	3.2	2	3	96	5.8	71
Coker 5110															
Northwest Texas	3	94	34.0	1.07	44	4.2	82	23	6.9	3.7	1	3	101	5.9	54
Deltapine 16															
South Carolina	3	94	35.0	1.11	47	4.9	79	22	6.9	3.1	2	2	98	5.0	68
Arkansas	16	94	34.7	1.12	45	4.4	82	23	7.8	3.1	2	2	99	5.5	66
Louisiana	12	93	34.7	1.12	45	4.6	80	22	7.9	2.7	2	3	97	4.9	64
Mississippi	21	91	35.0	1.13	44	4.2	80	22	7.9	3.3	2	2	98	5.7	67
Arizona	11	100	34.7	1.11	44	4.5	85	23	7.2	2.5	0	3	105	5.0	58
California	3	100	34.7	1.10	44	4.7	89	24	6.6	2.0	1	2	104	5.8	54
West Texas	3	100	34.0	1.08	42	3.4	79	22	8.5	2.5	0	2	107	5.2	64
Dixie King II															
Georgia	3	87	33.3	1.01	47	4.7	85	22	6.1	4.3	3	4	92	6.1	52

Table 4.--Continued

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SHORT STAPLE							Carded Yarns								
Lankart 57			8s		8s		8s		8s						
Oklahoma	3	86	272	6.4	7.8	113	120	11	13	82.6	4.0	95	28.6	26.0	101
Lankart LX-571															
Central Texas	3	90	288	6.2	7.2	113	127	17	23	82.0	4.1	94	30.1	24.9	93
Northwest Texas	9	92	293	6.6	7.8	110	124	15	19	81.8	3.9	94	29.0	25.4	98
Lankart 611															
Northwest Texas	3	91	299	7.1	8.0	103	123	18	23	82.7	3.6	98	28.8	26.6	103
Paymaster 18															
Northwest Texas	3	78	265	5.9	7.4	113	127	10	12	81.1	4.0	92	29.1	25.2	97
Paymaster 202															
Northwest Texas	3	88	293	5.9	7.3	100	120	16	19	82.6	3.7	97	29.2	25.2	96
MEDIUM STAPLE															
Acala SJ-1			50s		50s		50s		50s						
California	33	123	43	6.0	4.5	99	76	18	14	82.1	3.5	96	28.4	25.2	98
Acala SJ-2															
California	3	125	45	6.2	4.7	103	83	17	12	81.8	3.7	95	28.3	25.3	99
Auburn M															
Missouri	3	95	30	6.6	4.5	93	70	30	25	82.9	3.3	99	28.4	25.4	99
Brycot #4															
Arkansas	3	101	32	6.3	4.4	100	73	20	17	82.0	3.3	97	28.6	25.6	99
Coker 201															
Georgia	3	96	30	5.9	4.1	90	70	30	22	82.3	3.3	98	29.3	26.0	100
North Carolina	3	100	30	6.2	4.1	117	87	18	13	81.6	3.7	94	28.9	24.7	95
South Carolina	6	102	34	6.2	4.4	102	82	25	19	82.5	3.4	98	28.8	26.0	100
Coker 417															
Alabama	4	120	42	6.8	4.9	102	82	20	16	82.6	4.0	96	30.1	24.7	92
Coker 5110															
Northwest Texas	3	98	30	6.3	4.6	87	70	23	18	82.0	4.0	94	29.3	25.3	97
Delta Pine 16															
South Carolina	3	102	34	6.3	4.5	103	83	19	15	82.5	3.2	98	28.6	24.8	96
Arkansas	16	110	37	7.0	5.1	110	82	18	14	82.8	3.1	100	28.2	25.8	101
Louisiana	12	102	34	6.7	4.8	102	79	24	18	82.8	3.2	99	28.2	25.9	101
Mississippi	21	108	36	7.0	5.1	106	79	18	14	82.6	3.2	99	28.7	25.3	98
Arizona	11	104	34	6.5	4.7	105	80	17	12	83.2	3.0	101	27.9	26.6	104
California	3	101	31	6.0	4.2	100	73	18	15	82.5	2.9	100	28.9	26.7	103
West Texas	3	106	33	7.4	5.4	93	73	15	16	84.3	3.2	103	28.1	26.6	104
Dixie King II															
Georgia	3	97	30	5.9	4.1	120	93	14	11	81.6	4.0	93	29.7	23.5	89

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1973--Continued

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
MEDIUM STAPLE (Continued)	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
Dixie King III															
Mississippi	3	88	34.3	1.08	48	4.6	86	23	5.9	5.0	3	2	90	6.8	63
Lockett EXL															
Northwest Texas	3	91	32.7	1.06	45	4.3	84	22	6.7	3.7	3	4	97	6.2	53
Lockett 4789A															
Northwest Texas	6	97	32.3	1.04	46	4.2	86	23	6.6	3.2	2	3	100	5.7	56
McNair 511															
North Carolina	3	88	35.0	1.09	47	4.5	81	23	6.8	5.3	3	3	96	7.8	64
Stoneville 7A															
Arkansas	3	94	34.3	1.10	43	4.2	85	21	5.9	3.9	2	3	99	7.0	57
Mississippi	4	92	34.8	1.12	46	4.7	92	22	5.4	3.5	2	2	95	6.4	60
Stoneville 213															
Arkansas	18	91	34.6	1.10	46	4.5	81	22	7.0	3.5	2	3	96	6.2	61
Louisiana	6	89	34.3	1.10	46	4.6	81	22	7.0	3.5	3	3	94	6.1	59
Mississippi	18	90	34.3	1.10	45	4.7	82	22	6.8	3.7	3	3	95	6.2	59
Missouri	3	95	34.0	1.07	45	4.3	82	22	6.9	2.3	2	3	100	5.3	60
Arizona	3	99	35.0	1.08	45	4.9	93	23	5.9	2.4	0	3	104	5.9	47
West Texas	3	99	34.0	1.06	44	4.2	80	21	7.1	2.4	0	3	104	5.0	54
Stoneville 603															
Alabama	3	91	34.0	1.05	45	4.2	82	22	7.6	3.8	2	2	98	5.8	58
Tamcot SP37															
Central Texas	3	79	32.3	1.02	42	3.3	82	21	6.5	5.3	4	3	89	8.9	46
LONG STAPLE															
Acala 1517V															
New Mexico	6	99	36.5	1.17	44	3.6	93	27	6.3	2.5	1	3	103	7.3	91
Coker 310															
Alabama	3	91	33.7	1.12	43	4.5	85	23	6.9	3.0	2	3	96	7.6	60
Georgia	6	90	34.2	1.12	45	4.8	82	23	6.7	3.5	3	4	92	8.4	62
South Carolina	3	85	35.0	1.16	44	4.4	80	23	6.7	5.0	3	3	94	9.2	73
Mississippi	4	87	36.0	1.18	44	4.2	86	24	6.4	5.5	2	2	94	9.4	68
EXTRA LONG STAPLE															
Pima S-4				Array											
Arizona	5	4	44.0	1.49	31	3.9	105	36	7.2	3.7	3	5	92	8.1	
West Texas	9	3	44.0	1.44	32	3.7	100	33	7.4	3.2	4	5	87	8.0	

Table 4.--Continued

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
MEDIUM STAPLE (Continued)															
Dixie King III															
Mississippi	3	110	37	6.1	4.4	107	87	21	15	82.4	3.4	98	29.5	25.1	95
Lockett EXL															
Northwest Texas	3	100	30	6.4	4.4	97	80	13	12	81.8	3.6	95	28.9	25.8	100
Lockett 4789A															
Northwest Texas	6	104	32	6.5	4.6	95	78	16	12	82.1	3.7	96	28.9	25.5	98
McNair 511															
North Carolina	3	113	39	6.6	5.0	93	77	31	21	83.1	3.4	99	28.5	26.5	103
Stoneville 7A															
Arkansas	3	96	28	5.8	3.9	100	77	25	20	82.2	3.1	98	29.4	25.6	98
Mississippi	4	101	30	5.7	3.8	110	78	18	15	82.1	3.3	97	29.6	25.7	98
Stoneville 213															
Arkansas	18	100	32	6.4	4.6	102	82	22	18	82.2	3.4	97	28.4	25.5	99
Louisiana	6	96	30	6.2	4.4	100	80	23	17	82.5	3.4	98	28.9	25.4	98
Mississippi	18	99	31	6.3	4.5	106	79	21	16	82.1	3.3	97	28.9	25.3	98
Missouri	3	97	33	7.0	5.0	100	73	19	12	82.9	3.3	99	28.2	25.6	100
Arizona	3	96	28	5.6	4.2	110	87	11	8	82.4	3.2	98	28.5	26.4	102
West Texas	3	100	31	6.9	5.0	97	77	22	15	83.5	3.7	99	27.6	25.1	99
Stoneville 603															
Alabama	3	101	30	6.7	4.5	103	80	25	18	82.6	3.4	98	28.7	24.2	93
Tamcot SP37															
Central Texas	3	90	27	5.9	4.2	87	60	41	29	83.1	3.8	98	30.6	24.3	90
LONG STAPLE															
Acala 1517V															
New Mexico	6	135	48	6.6	5.0	95	77	17	14	83.1	3.3	100	27.9	25.0	98
Coker 310															
Alabama	3	103	32	6.2	4.5	113	87	14	11	83.0	3.2	99	28.3	25.0	97
Georgia	6	103	31	6.2	4.5	120	90	14	10	82.4	3.8	96	28.9	25.4	98
South Carolina	3	104	35	6.2	4.9	110	87	17	15	82.6	3.2	98	29.1	25.5	98
Mississippi	4	116	39	6.3	4.8	110	88	22	16	83.3	3.3	100	29.9	24.8	93
EXTRA LONG STAPLE							Combed Yarns								
Pima S-4		50s	80s	50s	80s	50s	80s	50s	80s						
Arizona	5	71	39	5.6	4.9	118	110	1	1	82.5	4.2	95	28.6	26.0	101
West Texas	9	65	35	5.4	4.8	120	117	1	1	82.0	4.3	93	27.7	25.7	101

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
SOUTH TEXAS														
TAFT			LANKART 611				90 PERCENT							
SLM	41	31	0.97	47	4.1	72	20	5.8	4.2	4.9	3	3	91	4.8
LM LT SP	52	31	0.97	48	4.3	70	18	7.5	3.6	4.7	5	3	83	7.5
CENTRAL TEXAS														
AVALON			LANKART LX 571				99 PERCENT							
M	31	31	0.97	45	4.6	89	21	6.1	1.9	3.0	2	4	99	4.9
SLM LT SP	42	31	1.00	46	4.7	88	20	6.5	2.3	3.3	4	4	91	6.6
LM	51	31	1.04	46	5.0	84	21	6.5	3.1	4.3	3	3	92	6.9
ITASCA			LANKART LX 571				100 PERCENT							
LM LT SP	52	32	1.02	46	4.5	89	20	6.5	3.0	3.9	4	4	86	8.3
SLM LT SP	42	31	0.99	45	4.6	86	21	6.3	2.1	2.9	4	3	86	7.0
SLM LT SP	42	31	1.00	44	4.8	84	19	6.7	2.2	3.4	4	3	90	6.5
PRINCETON			LANKART LX 571				98 PERCENT							
LM	51	33	1.02	48	4.4	89	22	6.1	5.3	5.6	3	3	95	7.6
LM	51	32	1.02	46	4.6	86	22	5.9	2.4	3.3	4	3	88	6.7
1/ LM	51	31	0.99	46	5.0	79	21	6.5	1.8	3.0	4	3	88	6.1
TAYLOR			LANKART LX 571				95 PERCENT							
LM	51	33	1.05	46	4.5	84	22	6.3	3.0	4.0	4	3	89	7.3
LM	51	32	0.99	47	4.5	80	21	6.3	3.7	4.9	3	3	95	6.2
LM	51	32	1.02	48	4.4	84	21	6.5	3.5	4.6	4	3	90	7.2
WACO			LANKART LX 571				95 PERCENT							
SLM	41	32	1.03	46	4.4	88	22	5.8	2.2	2.9	2	4	97	5.8
SLM	41	33	1.06	47	4.4	87	21	6.1	2.4	3.8	2	3	97	6.7
LM LT SP	52	32	1.01	46	4.8	87	23	5.8	2.3	3.6	5	3	82	6.6
WAXAHACHIE			LANKART 57				99 PERCENT							
M LT SP	32	32	0.97	46	4.6	81	23	6.4	2.3	3.6	2	4	97	5.9
SLM LT SP	42	31	0.98	45	4.8	86	20	6.6	1.6	2.4	3	4	91	6.2
2/ LM LT SP	52	31	1.00	46	4.7	82	22	6.2	3.0	3.7	4	3	85	7.0

1/ Reduced from 41 because of bark
2/ Reduced from 42 because of bark

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973

State, Production Area Chronological sampling and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
Grade	Staple		8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	R_d	+b	Index	R_d	+b	Index	R_d	-b	Index
SOUTH WEST																				
SOUTH TEXAS																				
TAFT				LANKART 611						90 PERCENT										
SLM	41	31	295	92	8.3	7.3	120	80	41	32	46	66.0	10.6	86	83.9	3.6	100	30.1	26.2	99
LM LT SP	52	31	282	87	8.1	6.6	130	110	29	24	40	62.5	10.7	81	83.8	3.8	99	29.7	25.4	96
CENTRAL TEXAS																				
AVALON				LANKART LX 571						99 PERCENT										
M	31	31	315	99	7.9	6.8	130	120	17	15	43	68.2	11.4	94	84.5	3.5	102	28.8	26.0	100
SLM LT SP	42	31	287	92	7.0	6.1	130	130	20	20	46	67.1	11.8	93	82.6	3.6	97	28.8	25.7	99
LM	51	31	296	96	7.5	6.4	120	110	19	16	48	66.1	10.8	87	82.6	3.6	97	29.3	25.9	99
ITASCA				LANKART LX 571						100 PERCENT										
LM LT SP	52	32	306	98	7.1	6.4	130	110	32	23	51	65.3	11.9	89	81.9	4.2	93	30.3	25.4	95
SLM LT SP	42	31	278	87	7.1	6.1	130	110	17	14	38	63.8	11.3	84	82.5	4.0	95	29.8	24.5	92
SLM LT SP	42	31	281	84	7.3	6.2	120	120	21	14	39	64.3	10.9	84	81.5	4.0	93	30.2	24.8	93
PRINCETON				LANKART LX 571						98 PERCENT										
LM	51	33	330	107	7.3	6.8	120	110	23	23	47	67.8	11.1	92	84.6	3.4	103	29.2	26.0	100
LM	51	32	298	97	7.2	6.3	130	110	17	16	46	65.6	11.2	87	82.7	3.6	97	30.0	23.0	86
1/ LM	51	31	273	85	7.2	5.9	120	100	14	13	45	65.5	10.5	85	81.8	3.7	95	31.4	25.1	92
TAYLOR				LANKART LX 571						95 PERCENT										
LM	51	33	325	102	8.2	7.1	120	110	23	18	41	67.3	10.0	87	84.3	3.6	101	29.7	26.3	100
LM	51	32	312	97	7.5	6.8	130	120	35	25	44	67.7	11.1	92	84.2	3.5	101	29.6	26.0	99
LM	51	32	313	99	7.7	6.8	130	120	22	17	42	67.1	11.4	91	84.9	3.6	103	29.3	25.7	98
WACO				LANKART LX 571						95 PERCENT										
SLM	41	32	344	112	7.6	7.0	130	120	18	14	46	67.5	11.9	94	83.6	3.5	100	30.2	24.5	92
SLM	41	33	346	114	7.7	6.6	130	120	22	17	49	68.8	11.4	95	85.5	3.5	104	29.3	25.9	99
LM LT SP	52	32	298	100	7.2	6.5	130	110	14	12	53	62.4	11.0	81	82.7	3.9	96	30.6	22.7	84
WAXAHACHIE				LANKART 57						99 PERCENT										
M LT SP	32	32	299	93	7.6	6.3	120	100	41	32	43	67.1	10.6	89	84.5	3.6	102	30.2	26.7	100
SLM LT SP	42	31	286	88	7.2	6.1	130	110	30	23	43	66.3	11.6	90	81.6	3.4	96	29.6	25.4	96
2/ LM LT SP	52	31	273	89	6.8	6.0	120	90	24	25	45	63.9	10.7	83	82.0	4.1	94	30.9	25.1	93

1/ Reduced from 41 because of bark
2/ Reduced from 42 because of bark

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling and Classification		Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST													
NORTHWEST TEXAS													
ANSON		LANKART 611				100 PERCENT							
SLM 41	30	0.93	46	4.2	81	21	8.4	1.9	2.8	2	3	98	5.4
SLM 41	31	0.96	46	4.2	78	20	8.2	1.4	2.8	1	3	102	6.8 3/
SLM LT SP 42	31	0.95	47	4.5	80	19	8.4	1.7	2.6	2	3	98	5.9 3/
BULA		RILCOT 90				80 PERCENT							
M 31	30	0.91	48	4.8	82	21	7.0	1.1	2.3	1	3	102	6.1
M LT SP 32	29	0.93	45	4.0	86	22	6.9	2.0	2.9	1	3	102	6.0 3/
M LT SP 32	30	0.91	48	3.9	85	23	6.7	2.9	3.9	2	4	100	5.6
BURKBURNETT		LANKART LX 571				100 PERCENT							
SLM LT SP 42	32	0.99	45	4.7	79	21	7.0	2.5	4.0	2	3	97	6.0
SLM 41	32	0.98	47	4.8	76	20	7.3	1.9	3.1	2	3	98	6.6
SLM 41	32	0.96	45	4.8	78	20	7.0	1.8	2.8	2	3	97	6.5
EDMONSON		STRIPPER 31				95 PERCENT							
M 31	29	0.87	48	4.8	86	20	6.4	1.0	2.3	1	3	102	6.8
M LT SP 32	30	0.95	46	3.4	81	22	6.8	2.8	4.5	2	5	99	6.0 3/
SLM LT SP 42	30	0.91	48	3.9	79	22	7.0	1.8	3.2	3	4	97	6.4
ELDORADO		LANKART 57				85 PERCENT							
1/ LM LT SP 52	31	1.02	45	3.7	82	21	7.4	3.3	5.1	3	3	91	8.3
2/SGO 61	31	0.98	45	4.2	79	20	7.6	3.9	5.4	4	4	90	8.6
1/ LM LT SP 52	31	0.99	43	4.1	76	21	7.5	2.3	3.3	3	3	91	7.3
HALE CENTER		PAYMASTER 18				100 PERCENT							
M 31	29	0.87	48	4.9	81	17	6.9	1.0	2.4	1	3	101	6.6 3/
M 31	30	0.90	47	4.3	82	20	6.6	1.3	2.7	1	3	103	5.7 3/
M 31	30	0.88	47	4.9	80	19	6.3	2.4	3.4	2	3	100	5.1
HART		STRIPPER 31				90 PERCENT							
M LT SP 32	30	0.90	46	4.3	80	19	6.5	2.7	4.4	2	4	100	6.4 3/
SLM LT SP 42	30	0.90	47	4.0	85	21	6.1	2.8	4.3	2	4	97	7.9 3/
SLM 41	32	0.97	43	2.9	80	22	6.7	2.9	4.0	1	3	103	6.7 3/

1/ Reduced from 42 because of bark
2/ Reduced from 51 because of bark
3/ Cotton stuck to processing rolls

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area Chronological sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
Grade	Staple	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	R_d	+b	Index	R_d	+b	Index	R_d	-b	Index
SOUTH WEST																			
NORTHWEST TEXAS																			
ANSON			LANKART 611					100 PERCENT											
SLM 41	30	299	91	8.4	7.2	120	110	24	23	42	68.4	11.0	93	81.7	3.6	95	29.0	27.3	105
SLM 41	31	294	89	8.7	7.2	120	90	21	16	46	70.3	10.7	96	83.3	3.6	99	28.6	26.5	103
SLM LT SP 42	31	305	92	6.8	7.0	130	110	23	14	44	68.0	10.7	91	83.2	3.6	99	28.7	25.9	100
BULA			RILCOT 90					80 PERCENT											
M 31	30	283	88	7.5	6.4	130	120	19	15	37	70.6	10.9	97	82.8	3.2	99	28.4	25.8	100
M LT SP 32	29	301	93	8.4	6.8	130	120	18	11	38	69.4	11.5	97	82.7	3.7	97	28.4	25.8	100
M LT SP 32	30	305	93	7.9	6.8	130	120	13	12	42	69.8	11.4	97	82.7	3.2	99	29.2	25.7	98
BURKBURNETT			LANKART LX 571					100 PERCENT											
SLM LT SP 42	32	279	88	7.6	6.8	120	90	29	25	41	68.0	11.2	93	81.4	3.7	94	28.2	26.1	102
SLM 41	32	300	94	8.6	7.3	120	110	16	13	48	68.8	11.1	94	82.9	3.4	99	29.3	25.6	98
SLM 41	32	283	86	7.9	6.5	130	120	15	10	41	68.6	10.6	92	81.2	4.1	92	29.4	25.6	98
EDMONSON			STRIPPER 31					95 PERCENT											
M 31	29	261	90	7.5	5.0	120	100	9	8	32	71.2	10.6	97	82.1	3.2	98	27.9	25.2	99
M LT SP 32	30	297	92	7.9	6.8	120	90	22	15	40	68.4	12.4	98	83.0	4.2	96	29.0	25.7	99
SLM LT SP 42	30	284	91	8.0	6.7	130	110	22	17	40	68.1	11.8	95	81.9	4.3	93	28.4	25.7	100
ELDORADO			LANKART 57					85 PERCENT											
1/ LM LT SP 52	31	291	92	7.9	6.7	120	100	38	28	46	67.8	11.4	93	83.0	3.9	97	29.6	24.8	94
2/ SGO 61	31	275	84	8.0	7.0	120	100	26	24	47	66.0	11.3	88	82.6	3.5	98	29.3	25.7	98
1/ LM LT SP 52	31	278	87	8.1	6.9	130	100	19	22	41	66.7	11.3	90	83.3	3.3	100	30.1	25.3	95
HALE CENTER			PAYMASTER 18					100 PERCENT											
M 31	29	258	77	7.3	6.2	130	110	8	8	33	70.1	10.6	95	81.5	3.8	94	29.2	25.3	97
M 31	30	278	82	7.6	6.3	120	110	15	11	33	70.0	10.5	94	81.8	3.5	96	28.0	25.9	102
M 31	30	258	76	7.2	5.3	130	120	12	12	31	69.9	10.4	94	79.9	4.7	86	30.2	24.4	91
HART			STRIPPER 31					90 PERCENT											
M LT SP 32	30	273	78	7.5	5.8	130	110	14	16	34	69.4	11.3	96	82.2	3.5	97	28.7	25.0	97
SLM LT SP 42	30	279	84	7.5	6.2	120	110	26	22	37	67.8	11.5	93	82.3	4.0	95	28.7	25.3	98
SLM 41	32	309	99	8.4	7.2	120	100	27	22	56	70.3	11.3	98	83.5	4.3	96	29.2	25.3	97

1/ Reduced from 42 because of bark
2/ Reduced from 51 because of bark

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
NORTHWEST TEXAS														
LENORAH			WESTERN STORMPROOF				95 PERCENT							
SM	21	31	0.91	44	4.0	85	19	5.8	1.1	2.0	1	4	102	4.9
M	31	31	0.93	47	4.3	83	20	6.4	1.5	1.9	1	3	104	5.9
M	31	30	0.96	45	4.2	82	18	6.4	1.1	2.3	1	3	103	5.8
MEADOW			LANKART 57				70 PERCENT							
SLM	41	30	0.96	46	4.8	93	22	6.4	1.0	2.4	2	3	99	5.2
SLM	41	31	0.98	46	4.3	85	22	6.9	1.8	3.2	2	3	100	5.4 1/
SLM	41	31	0.95	46	4.3	83	21	6.3	2.0	3.1	1	3	101	6.3 1/
PADUCAH			LANKART 57				90 PERCENT							
M LT SP	32	31	1.01	45	4.6	82	22	7.5	1.7	3.0	2	3	99	5.3
M LT SP	32	32	0.98	45	4.7	75	20	7.5	2.8	3.9	3	4	95	4.9
M LT SP	32	31	0.99	45	4.1	77	21	7.4	1.7	2.7	2	4	98	5.7
RALLS			PAYMASTER 909				70 PERCENT							
SLM	41	31	0.99	45	4.4	83	21	7.5	1.6	2.8	1	3	101	6.3
M	31	32	0.96	46	4.1	78	23	7.8	2.3	2.9	1	3	101	4.9 1/
RULE			LANKART LX 571				100 PERCENT							
SLM	41	31	0.99	46	4.7	88	21	6.5	1.2	2.1	2	3	96	5.7
SLM	41	32	1.03	47	4.7	82	23	7.2	1.6	3.0	2	3	97	5.3
SLM LT SP	42	31	1.02	44	5.0	79	21	6.8	1.3	2.4	3	3	95	7.3
SEAGRAVES			PAYMASTER 202				100 PERCENT							
M	31	29	0.88	45	3.8	88	20	6.0	1.5	2.8	1	3	104	7.1
M	31	30	0.89	45	3.9	89	21	6.2	1.5	3.1	1	3	103	5.9
M LT SP	32	30	0.93	45	3.5	87	23	5.9	1.6	3.4	2	4	99	6.9
STAMFORD			LANKART LX 571				100 PERCENT							
SLM LT SP	42	31	0.98	47	4.7	87	22	6.5	2.0	3.0	2	3	97	5.8
SLM	41	32	0.99	47	4.9	83	22	6.5	1.7	2.7	2	3	98	6.8 1/
SLM	41	32	1.03	47	4.7	80	19	7.7	1.8	2.8	2	3	100	5.1

1/ Cotton stuck to processing rolls

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area Chronological sampling and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
Grade	Staple		8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	R_d	+b	Index	R_d	+b	Index	R_d	-b	Index
SOUTH WEST																				
NORTHWEST TEXAS																				
LENCRAH				WESTERN STORMPROOF					95 PERCENT											
SM		21 31	277	88	7.5	6.3	120	100	15	13	37	71.3	11.7	101	82.7	3.7	97	27.9	23.3	91
M		31 31	291	89	7.8	6.6	130	110	11	8	38	70.6	11.6	99	83.9	3.4	101	28.5	25.8	100
M		31 30	279	87	7.4	6.2	130	120	16	9	37	70.0	10.8	96	82.7	3.5	98	28.8	25.8	100
MEADOW				LANKART 57					70 PERCENT											
SLM		41 30	297	91	7.7	6.3	130	110	23	13	41	69.7	11.1	96	81.6	4.1	93	29.2	25.4	97
SLM		41 31	313	98	8.2	7.0	120	110	17	15	50	70.1	10.8	96	82.9	3.8	97	28.3	26.1	102
SLM		41 31	295	93	7.8	6.4	120	90	21	15	47	70.5	10.5	96	80.9	4.3	90	29.9	25.6	97
PADUCAH				LANKART 57					90 PERCENT											
M LT SP		32 31	287	89	7.9	6.9	110	110	29	17	45	67.4	11.0	90	82.7	4.0	96	27.7	26.2	103
M LT SP		32 32	288	89	8.4	6.9	120	100	27	20	47	69.1	11.2	95	83.0	4.3	95	28.6	25.8	100
M LT SP		32 31	283	88	7.9	6.8	120	110	21	15	44	66.7	11.0	89	81.2	4.9	89	28.6	26.1	101
RALLS				PAYMASTER 909					70 PERCENT											
SLM		41 31	317	102	8.7	7.3	120	90	21	18	56	67.8	10.4	89	81.5	4.2	92	28.6	25.8	100
M		31 32	309	97	8.1	6.8	120	100	16	11	46	69.4	11.5	97	82.1	3.8	95	29.7	25.5	97
RULE				LANKART LX 571					100 PERCENT											
SLM		41 31	291	94	7.4	6.3	130	120	29	19	47	67.7	11.4	93	82.8	3.8	97	28.9	25.1	97
SLM		41 32	299	95	7.9	7.0	120	100	23	20	47	68.5	11.0	93	81.8	3.7	95	28.9	25.1	97
SLM LT SP		42 31	286	88	7.7	6.4	130	100	15	13	45	67.9	11.2	92	81.3	4.4	91	30.0	25.6	96
SEAGRAVES				PAYMASTER 202					100 PERCENT											
M		31 29	277	80	7.0	5.4	120	100	14	11	34	72.8	11.1	101	82.6	3.1	99	28.8	24.9	96
M		31 30	294	92	7.5	6.3	120	110	17	17	38	71.8	10.4	97	83.5	3.7	99	29.6	25.6	97
M LT SP		32 30	307	93	7.3	5.9	120	90	27	21	42	69.6	11.9	98	81.6	4.4	92	29.3	25.0	95
STAMFORD				LANKART LX 571					100 PERCENT											
SLM LT SP		42 31	300	96	7.7	6.2	120	110	22	17	46	68.2	11.5	94	79.8	4.7	86	28.5	22.9	89
SLM		41 32	287	89	7.8	6.6	120	110	9	9	46	68.7	11.2	94	82.2	3.5	97	28.8	26.3	102
SLM		41 32	309	96	7.9	6.7	130	130	13	9	47	69.3	10.6	93	82.8	3.6	98	28.8	26.1	101

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
NORTHWEST TEXAS														
TULIA			STRIPPER 31				90 PERCENT							
M LT SP	32	28	0.87	49	5.0	85	19	6.5	1.7	2.8	2	4	98	7.4 1/
M LT SP	32	30	0.91	48	4.2	88	21	6.4	1.8	3.1	2	4	100	6.3
M LT SP	32	29	0.87	47	4.2	79	21	6.9	2.6	3.8	2	4	98	6.5 1/
OKLAHOMA														
CARNEGIE			LANKART 57				100 PERCENT							
M LT SP	32	30	0.94	45	4.8	77	20	7.4	1.0	1.6	2	4	98	3.9
M LT SP	32	31	0.97	46	4.5	77	20	7.4	1.3	2.5	2	3	98	5.5
M LT SP	32	32	0.98	46	4.2	76	21	8.0	1.0	2.2	2	3	100	5.4
GOTEBO			LANKART 57				99 PERCENT							
M LT SP	32	31	0.94	46	4.9	85	20	7.1	1.5	2.4	2	4	98	5.2
SLM	41	31	0.95	46	4.8	79	20	7.0	3.5	4.8	2	3	99	6.6
SLM	41	32	0.99	46	4.2	73	20	7.7	2.3	3.4	2	3	99	6.5

1/ Cotton stuck to processing rolls

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area Chronological sampling and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
Grade		Staple	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	Potential	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																				
NORTHWEST TEXAS																				
TULIA				STRIPPER 31						90 PERCENT										
M LT SP	32	28	261	75	7.3	5.7	120	110	14	10	31	68.9	11.2	95	80.4	3.9	91	28.3	26.3	103
M LT SP	32	30	284	85	7.4	6.2	120	120	17	13	33	67.9	11.5	93	82.3	3.9	95	27.9	26.0	102
M LT SP	32	29	260	74	7.5	5.9	120	110	18	14	28	68.0	12.2	96	82.2	4.2	94	29.4	25.4	97
OKLAHOMA																				
CARNEGIE				LANKART 57						100 PERCENT										
M LT SP	32	30	263	81	7.4	6.0	120	120	15	12	35	67.5	11.3	92	82.5	4.0	95	28.7	25.8	100
M LT SP	32	31	272	89	7.9	6.5	120	100	11	10	44	68.2	11.5	94	82.6	4.1	95	28.8	26.0	100
M LT SP	32	32	280	89	8.2	6.8	120	120	13	12	45	68.7	11.2	94	82.6	4.0	96	28.4	26.1	102
GOTEBO				LANKART 57						99 PERCENT										
M LT SP	32	31	292	90	8.2	6.8	130	110	13	11	43	68.7	11.0	93	82.0	3.9	95	29.0	25.7	99
SLM		41	31	279	85	8.2	6.7	130	120	10	9	36	68.6	11.0	93	82.2	3.9	95	29.7	25.1	95
SLM		41	32	297	91	9.2	7.5	120	100	19	16	49	68.4	10.8	92	83.4	4.2	97	28.3	26.5	103

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973 --Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
ALABAMA														
CUBA			DIXIE KING II				80 PERCENT							
LM	51	34	1.07	47	5.1	77	20	7.5	2.6	3.4	3	3	94	6.0
LM	51	34	1.11	45	4.6	75	22	8.1	2.1	2.7	3	3	95	7.3
LM	51	34	1.10	45	4.6	78	19	7.8	2.6	3.3	3	3	90	6.0
LM	51	34	1.07	46	4.7	73	19	6.8	3.5	4.5	4	2	87	8.3
CULLMAN			DIXIE KING II				80 PERCENT							
SLM	41	34	1.03	45	4.5	83	21	6.4	2.0	2.5	2	3	98	5.1
LM	51	33	1.03	46	4.7	80	22	6.8	2.4	3.1	3	3	95	5.9
SLM	41	33	0.99	45	4.8	82	21	6.8	1.4	4.0	2	3	97	5.1
GREENBRIER			STONEVILLE 213				98 PERCENT							
SLM	41	34	1.06	45	4.6	80	22	7.5	2.2	2.8	2	3	97	5.3
SLM	41	33	1.01	47	4.7	79	22	7.3	2.0	3.0	1	3	101	6.9
LM	51	33	1.04	46	4.0	80	22	7.9	2.0	3.8	2	3	98	4.8
HARPERSVILLE			DELTAPINE 16				90 PERCENT							
SLM	41	34	1.09	44	4.4	85	22	6.6	1.6	2.6	3	3	95	5.4
LM	51	34	1.09	46	4.5	84	23	7.4	2.4	3.7	2	2	98	5.6
SLM	41	33	1.04	46	4.4	87	22	6.8	1.7	2.8	2	2	99	4.0
HUNTSVILLE			STONEVILLE 213				85 PERCENT							
LM	51	34	1.05	46	5.0	83	22	6.7	3.1	3.8	3	3	91	5.6
LM	51	33	1.05	48	4.9	78	20	7.9	1.8	2.7	3	3	95	5.5
SLM	41	33	1.01	47	4.8	80	21	7.6	1.8	2.8	2	3	99	5.5
PRATTVILLE			COKER 417				100 PERCENT							
SLM	41	35	1.14	46	3.8	94	25	5.9	2.5	3.2	2	3	97	4.9
SLM	41	35	1.11	47	4.0	84	26	6.2	2.1	3.0	2	3	98	7.5
SLM	41	35	1.10	46	4.1	88	24	6.1	1.3	1.9	2	3	97	4.8
LM	51	35	1.10	43	3.4	80	24	6.3	3.1	4.6	3	2	91	5.8
SYLACAUGA			STONEVILLE 603				100 PERCENT							
SLM	41	34	1.05	44	4.2	85	22	7.5	2.0	3.1	2	2	99	5.1
LM	51	34	1.06	46	4.2	81	23	7.5	3.8	5.0	3	2	95	7.4
SLM	41	34	1.03	46	4.1	79	21	7.9	2.3	3.3	2	2	99	4.8

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST ALABAMA																				
CUBA				DIXIE KING II					80 PERCENT											
LM		51 34	101	35	6.5	4.8	120	90	19	11	68	67.9	11.2	92	82.6	3.5	98	28.3	26.0	101
LM		51 34	97	31	6.9	4.7	120	90	13	11	67	66.9	10.5	88	83.1	3.1	100	28.4	25.4	99
LM		51 34	91	26	6.3	4.3	100	90	8	7	60	66.3	9.9	85	82.7	3.3	99	29.6	25.8	98
LM		51 34	88	26	6.2	4.2	110	70	14	12	59	66.7	10.3	87	83.4	3.6	99	29.6	25.7	98
CULLMAN				DIXIE KING II					80 PERCENT											
SLM		41 34	94	28	6.1	4.3	110	80	14	9	53	68.4	11.2	93	82.8	3.7	97	28.6	24.0	93
LM		51 33	88	28	6.1	4.5	110	90	13	13	50	67.9	10.5	90	82.7	3.0	100	28.0	25.7	101
SLM		41 33	82	22	6.0	4.3	120	90	12	9	42	70.0	10.1	93	81.5	3.0	97	29.2	24.6	94
GREENBRIER				STONEVILLE 213					98 PERCENT											
SLM		41 34	103	35	7.0	5.1	110	90	23	19	57	68.2	11.4	94	81.8	3.6	95	27.9	26.0	102
SLM		41 33	96	30	6.6	5.0	130	90	20	14	54	69.9	11.0	96	82.4	3.4	97	29.3	27.1	104
LM		51 33	100	31	6.9	5.0	100	70	29	23	59	69.1	11.0	94	81.6	3.6	95	28.2	26.8	105
HARPERSVILLE				DELTAPINE 16					90 PERCENT											
SLM		41 34	102	32	6.5	4.5	100	80	19	14	57	67.2	11.1	90	82.3	4.0	95	28.8	23.1	89
LM		51 34	108	34	6.5	4.7	100	90	19	16	69	69.5	10.2	92	82.3	3.0	99	28.8	25.6	99
SLM		41 33	98	27	6.7	4.3	100	70	16	12	54	68.9	9.6	89	82.1	3.2	98	29.4	25.6	98
HUNTSVILLE				STONEVILLE 213					85 PERCENT											
LM		51 34	97	32	6.7	4.7	110	90	23	23	54	66.4	11.6	90	82.7	3.5	98	29.1	25.8	99
LM		51 33	94	28	6.8	4.7	100	90	23	16	57	65.9	10.5	86	81.6	3.5	95	29.5	26.7	102
SLM		41 33	92	24	6.4	4.3	110	90	15	10	53	71.3	10.6	97	82.2	3.3	97	29.3	25.3	97
PRATTVILLE				COKER 417					100 PERCENT											
SLM		41 35	132	50	7.7	5.2	110	90	20	13	78	68.7	11.2	94	82.4	4.0	95	29.8	24.9	94
SLM		41 35	121	42	6.7	5.0	110	90	17	13	71	69.9	10.7	95	83.0	3.6	98	29.9	25.0	94
SLM		41 35	115	38	6.4	4.7	100	80	16	16	68	69.0	10.5	92	82.5	3.7	97	30.0	24.8	93
LM		51 35	112	37	6.3	4.7	90	70	28	20	67	64.5	10.0	83	82.7	4.9	92	30.8	24.2	89
SYLACAUGA				STONEVILLE 603					100 PERCENT											
SLM		41 34	101	31	6.6	4.6	100	80	19	13	58	68.9	10.9	93	83.6	3.5	100	28.6	23.3	90
LM		51 34	101	30	6.5	4.7	110	80	36	24	59	68.0	10.0	89	81.7	3.5	95	28.9	26.3	101
SLM		41 34	100	28	6.9	4.3	100	80	19	16	56	70.2	10.0	93	82.4	3.3	98	28.6	23.1	89

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
ALABAMA														
TUSKEGEE			DELTAPINE 16				95 PERCENT							
SLM	41	34	1.09	45	4.9	83	22	7.6	1.5	2.0	2	3	98	4.6
SLM	41	34	1.08	46	4.3	82	23	6.8	1.4	2.5	1	3	101	6.4
SLM	41	34	1.09	45	4.8	81	20	7.4	1.7	3.1	2	3	98	4.2
SLM	41	34	1.08	45	4.6	78	22	6.6	2.1	3.5	2	2	97	5.4
TYLER			COKER 201				95 PERCENT							
SLM	41	35	1.10	46	4.7	85	23	6.4	1.8	2.4	2	3	99	4.8
SLM	41	35	1.11	47	4.7	81	23	6.4	2.6	3.8	2	2	100	5.2
LM	51	35	1.10	46	4.6	80	22	6.5	3.6	4.8	3	2	94	6.1
GEORGIA														
BOSTWICK			DIXIE KING II				100 PERCENT							
SLM SP	43	34	0.99	46	4.5	86	23	6.2	3.7	5.2	4	4	90	6.0
SLM LT SP	42	33	1.03	47	4.7	85	21	6.0	2.8	4.3	3	4	92	6.0
SLM LT SP	42	33	1.01	47	4.8	83	21	6.0	2.0	3.5	3	3	94	6.4
DAWSON			STONEVILLE 213				70 PERCENT							
SLM	41	33	1.07	46	4.8	83	22	7.5	2.2	2.9	3	3	95	5.6
LM	51	33	1.07	46	4.7	85	21	7.1	3.4	4.3	3	3	92	6.4
LM	51	33	1.11	43	4.7	78	22	6.6	2.3	4.1	3	2	92	5.4
REYNOLDS			COKER 201				100 PERCENT							
SLM	41	34	1.10	45	4.6	87	23	5.8	1.5	2.2	2	3	96	5.1
SLM	41	34	1.09	44	4.5	84	21	6.8	1.8	2.8	2	3	99	5.7 1/
LM	51	34	1.08	43	4.4	80	22	6.8	1.9	2.7	3	2	93	6.2
TENNILLE			COKER 201				90 PERCENT							
LM	51	35	1.15	45	4.2	82	24	6.7	3.4	4.4	2	3	97	6.4
SLM	41	35	1.13	44	4.1	78	23	6.7	2.0	2.9	2	3	98	5.0
SLM LT SP	42	35	1.10	46	4.1	82	21	6.4	3.3	4.7	3	3	96	5.7
NORTH CAROLINA														
LAURINBURG			MCNAIR 511				100 PERCENT							
SLM	41	35	1.13	47	4.5	81	24	6.4	2.9	3.5	2	3	98	5.8
LM	51	35	1.08	47	4.6	82	24	6.9	4.6	6.2	3	3	94	10.1
LM	51	35	1.07	47	4.4	80	22	7.0	4.9	6.3	3	2	95	7.5

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST																				
ALABAMA																				
TUSKEGEE			DELTAPINE 16						95 PERCENT											
SLM		41 34	107	39	7.3	5.2	120	90	16	10	67	69.6	10.6	94	82.5	3.3	98	28.3	25.1	98
SLM		41 34	102	32	6.1	4.5	120	100	10	9	66	69.5	11.0	95	82.1	3.3	97	29.4	25.3	96
SLM		41 34	94	27	6.2	4.5	100	80	17	13	60	68.5	10.4	91	82.4	3.3	98	28.3	26.2	102
SLM		41 34	101	31	6.5	4.6	110	80	15	11	59	68.8	9.9	90	84.5	3.7	101	29.5	25.6	97
TYLER			COKER 201						95 PERCENT											
SLM		41 35	111	39	6.0	4.7	110	90	15	10	75	69.9	11.1	96	83.3	3.2	100	30.0	25.9	98
SLM		41 35	110	37	6.3	5.0	120	90	17	13	63	71.3	10.4	97	81.7	4.2	93	28.6	23.8	92
LM		51 35	100	32	6.4	4.7	100	70	21	17	56	66.4	9.9	85	82.3	3.4	97	29.3	25.8	99
GEORGIA																				
BOSTWICK			DIXIE KING II						100 PERCENT											
SLM SP		43 34	104	33	6.3	4.4	120	100	12	11	55	64.9	12.2	89	81.0	4.3	91	29.3	24.5	93
SLM LT SP		42 33	96	30	5.7	4.3	120	90	18	14	53	66.5	11.9	92	81.7	4.3	92	28.9	22.0	84
SLM LT SP		42 33	91	26	5.8	3.6	120	90	13	8	49	67.8	10.9	91	82.0	3.5	96	30.8	24.1	89
DAWSON			STONEVILLE 213						70 PERCENT											
SLM		41 33	96	30	6.4	4.5	110	80	23	14	62	70.1	11.3	97	81.6	3.6	95	30.3	24.5	91
LM		51 33	94	26	6.3	4.3	100	70	20	16	54	67.8	11.1	92	83.2	3.4	99	29.2	25.3	97
LM		51 33	91	27	6.3	4.5	100	70	23	19	51	66.4	10.0	86	80.8	3.5	93	29.9	25.2	95
REYNOLDS			COKER 201						100 PERCENT											
SLM		41 34	101	33	5.8	3.8	90	70	27	21	64	69.4	11.0	95	82.8	3.3	99	29.1	25.7	99
SLM		41 34	96	29	5.8	4.2	90	70	31	24	53	68.9	10.7	93	81.7	3.2	97	29.2	26.5	102
LM		51 34	92	28	6.1	4.3	90	70	33	21	53	66.4	9.7	85	82.5	3.3	98	29.6	25.9	98
TENNILLE			COKER 201						90 PERCENT											
LM		51 35	114	44	6.6	5.0	80	70	53	42	74	65.2	10.8	86	83.1	3.8	98	29.1	25.6	98
SLM		41 35	107	35	6.4	4.7	90	70	28	23	62	69.5	11.1	96	83.3	3.9	98	29.3	23.5	89
SLM LT SP		42 35	99	31	5.9	4.4	90	70	31	27	60	68.9	10.8	93	82.0	3.8	95	29.4	25.5	97
NORTH CAROLINA																				
LAURINBURG			MCNAIR 511						100 PERCENT											
SLM		41 35	118	44	6.4	5.0	110	80	21	17	63	69.4	10.8	94	83.7	3.5	100	29.4	26.5	101
LM		51 35	115	38	6.7	5.1	90	80	34	23	67	68.4	10.7	92	83.2	3.3	100	27.4	26.7	106
LM		51 35	106	35	6.6	4.8	80	70	37	22	62	68.7	10.3	91	82.3	3.4	97	28.6	26.2	102

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
NORTH CAROLINA														
SHELBY			COKER 201				100 PERCENT							
SLM	41	35	1.07	45	4.5	82	24	6.6	3.0	3.7	3	3	95	5.6
SLM	41	35	1.07	45	4.7	84	23	6.1	2.6	3.4	3	3	95	8.8
SLM	41	34	1.05	47	4.7	88	22	6.3	2.6	3.5	2	3	97	5.5
SOUTH CAROLINA														
CALHOUN FALLS			COKER 201				100 PERCENT							
LM	51	35	1.12	46	3.9	83	23	6.3	4.1	4.7	3	3	91	7.7
LM	51	34	1.08	46	4.5	81	23	6.5	4.2	5.0	3	3	95	7.5
LM	51	34	1.09	48	4.3	81	22	6.4	4.0	5.0	3	2	95	7.3
MULLINS			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.09	47	5.0	82	23	6.4	2.2	3.0	3	3	95	5.2
SLM	41	35	1.12	45	4.8	78	21	6.9	2.7	3.7	1	2	101	5.3
SLM	41	35	1.12	48	4.9	77	21	7.5	1.9	2.7	2	2	98	4.6
ST. MATTHEWS			COKER 201				100 PERCENT							
LM LT SP	52	35	1.08	48	5.1	83	23	5.7	6.1	7.1	4	4	89	8.4
SLM	41	34	1.11	45	5.0	85	22	6.6	2.2	2.9	2	3	99	7.0
LM	51	34	1.07	44	4.3	80	21	6.7	3.7	4.8	3	2	90	6.1
SOUTH CENTRAL														
ARKANSAS														
ALTHEIMER			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.12	45	4.9	84	22	7.4	1.5	2.1	2	3	99	5.1
SLM	41	35	1.14	45	4.8	81	24	7.4	1.8	2.7	2	3	97	5.6
SLM	41	35	1.09	45	4.0	82	22	8.6	1.7	3.0	2	2	97	5.3
SLM	41	35	1.14	45	3.6	80	23	8.2	2.6	4.3	1	2	101	5.8
BAY			STONEVILLE 213				95 PERCENT							
SLM	41	34	1.10	46	4.8	83	22	7.3	2.0	3.7	3	3	96	5.5
SLM	41	34	1.08	44	4.4	85	23	6.4	2.4	3.5	2	3	98	6.6
SLM	41	34	1.06	43	4.2	80	20	7.4	2.2	3.5	2	2	99	6.0

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST																				
NORTH CAROLINA																				
SHELBY			COKER 201						100 PERCENT											
SLM	41	35	103	34	6.2	4.1	110	80	26	16	63	66.2	10.9	88	82.0	3.6	96	30.3	25.5	95
SLM	41	35	106	34	6.7	4.5	130	90	15	11	59	69.2	10.8	94	81.8	4.1	93	27.5	24.0	95
SLM	41	34	92	22	5.7	3.6	110	90	13	12	53	70.5	10.3	95	80.9	3.5	94	28.8	24.6	95
SOUTH CAROLINA																				
CALHOUN FALLS			COKER 201						100 PERCENT											
LM	51	35	110	40	6.1	4.6	90	80	32	24	77	67.1	10.9	89	82.8	3.6	98	28.6	26.5	103
LM	51	34	101	33	6.3	4.4	100	80	22	18	59	67.5	10.8	90	83.2	3.4	99	28.8	25.6	99
LM	51	34	102	32	6.5	4.3	110	90	20	13	62	68.7	10.6	92	82.4	3.4	97	29.2	25.6	98
MULLINS			DELTAPINE 16						100 PERCENT											
SLM	41	35	97	34	5.5	4.2	110	100	22	15	69	68.7	11.0	93	82.0	3.3	97	29.6	25.6	97
SLM	41	35	109	36	6.6	4.8	90	70	23	21	69	70.0	10.8	96	83.1	3.4	99	27.8	23.2	91
SLM	41	35	99	31	6.7	4.5	110	80	12	8	66	68.6	9.8	89	82.5	3.0	99	28.5	25.7	100
ST. MATTHEWS			COKER 201						100 PERCENT											
LM LT SP	52	35	107	36	6.4	4.4	90	80	39	26	65	67.2	11.6	92	82.6	3.6	97	27.7	26.6	105
SLM	41	34	101	33	6.3	4.8	130	90	16	11	62	70.4	10.7	96	83.1	3.1	100	30.4	26.0	97
LM	51	34	94	28	5.9	4.1	90	70	23	20	60	69.1	10.3	92	81.1	3.5	94	28.1	25.8	101
SOUTH CENTRAL																				
ARKANSAS																				
ALTHEIMER			DELTAPINE 16						100 PERCENT											
SLM	41	35	110	42	6.6	5.1	110	80	20	13	66	68.4	10.0	89	83.2	3.2	100	28.1	26.3	103
SLM	41	35	110	36	6.6	5.0	110	70	29	24	67	69.1	10.2	91	82.5	3.2	99	27.5	25.0	99
SLM	41	35	111	35	6.9	5.2	120	70	20	17	69	69.7	10.2	93	83.4	3.2	101	28.2	26.2	102
SLM	41	35	119	42	7.8	5.8	100	70	20	17	72	70.3	10.4	95	84.6	3.4	103	27.8	26.5	104
BAY			STONEVILLE 213						95 PERCENT											
SLM	41	34	107	36	6.6	4.4	120	90	19	14	57	67.6	10.8	90	82.7	3.3	99	29.2	26.8	103
SLM	41	34	107	34	6.7	4.9	120	90	14	12	67	69.9	10.7	95	83.1	3.1	100	29.8	26.1	99
SLM	41	34	95	27	6.6	4.3	90	70	17	13	53	69.3	10.1	92	83.0	3.3	99	28.4	26.3	102

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
ARKANSAS														
CRAWFORDVILLE			DELTAPINE 16				93 PERCENT							
SLM	41	35	1.14	44	4.6	86	24	7.5	1.7	2.7	2	3	99	5.1
SLM	41	35	1.11	45	4.5	82	21	7.8	2.1	3.3	2	3	97	7.2
LM	51	34	1.08	43	3.5	80	21	8.3	3.3	4.8	2	1	98	6.6
DUMAS			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.10	47	5.1	83	22	6.8	2.5	3.1	2	3	96	5.5
SLM	41	35	1.10	47	5.0	80	22	6.3	2.1	3.4	2	3	98	5.1
SLM	41	35	1.08	47	5.1	82	22	7.0	2.0	3.2	3	2	95	4.8
EUDORA			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.13	44	4.6	82	23	7.5	2.6	3.3	1	2	101	4.9
SLM	41	34	1.11	46	5.0	81	23	8.1	2.1	3.0	2	3	99	5.4
SLM	41	34	1.13	45	4.5	78	22	7.6	1.7	3.2	2	2	96	4.8
HELENA			DELTAPINE 16				98 PERCENT							
SLM	41	34	1.09	45	4.6	90	22	6.1	1.7	2.4	3	3	93	5.3
SLM	41	35	1.13	46	4.5	77	21	7.9	2.7	3.9	2	3	98	5.5
SLM	41	35	1.12	45	4.6	78	22	7.7	2.2	3.6	2	2	97	5.7
HELENA			STONEVILLE 213				100 PERCENT							
LM	51	34	1.09	44	4.7	85	22	6.1	1.9	3.1	4	3	90	7.0
SLM	41	35	1.12	47	4.8	82	22	7.4	2.9	4.0	2	2	97	6.4
LM	51	35	1.11	46	4.2	82	22	7.3	2.8	3.9	3	2	92	6.3
HUGHES			STONEVILLE 213				100 PERCENT							
LM	51	34	1.11	47	4.9	80	20	6.7	2.7	3.3	3	3	91	6.3
LM	51	34	1.12	47	4.8	76	22	7.0	2.5	3.3	3	3	91	7.0
LM	51	35	1.13	48	4.4	80	22	7.5	3.9	4.8	3	2	94	6.6
LEACHVILLE			BRYCOT #4				100 PERCENT							
SLM	41	35	1.11	46	4.2	90	21	6.1	1.7	2.3	3	3	96	5.1
SLM	41	34	1.10	45	4.3	85	23	6.0	1.6	2.4	2	3	100	6.9
SLM	41	34	1.04	42	3.5	83	20	6.4	2.3	4.0	2	2	96	6.3

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL ARKANSAS																				
CRAWFORDVILLE			DELTAPINE 16						93 PERCENT											
SLM	41	35	114	40	6.9	5.0	110	90	17	13	70	70.4	10.5	95	81.3	3.2	96	26.9	25.5	102
SLM	41	35	102	33	6.9	4.8	120	100	8	7	62	71.8	10.1	97	82.5	3.3	98	28.9	23.4	90
LM	51	34	101	31	6.8	4.5	100	80	19	13	58	69.0	10.0	90	82.3	3.3	98	29.4	24.9	95
DUMAS			STONEVILLE 213						100 PERCENT											
SLM	41	35	101	36	6.3	4.3	120	100	19	13	63	69.3	10.8	94	81.6	3.4	96	27.9	26.3	103
SLM	41	35	103	33	6.2	4.5	110	90	17	14	63	70.2	10.3	94	82.7	3.3	99	28.6	23.3	90
SLM	41	35	95	28	5.9	4.2	100	90	10	9	52	66.4	9.9	85	82.1	3.2	98	28.0	26.3	103
EUDORA			DELTAPINE 16						100 PERCENT											
SLM	41	35	112	38	7.0	4.9	110	90	18	15	74	70.6	10.5	96	81.3	3.1	96	28.0	26.8	105
SLM	41	34	104	35	7.1	5.0	100	80	13	9	61	68.1	10.1	89	83.1	2.9	101	28.2	26.0	102
SLM	41	34	104	34	7.1	5.2	90	70	20	12	65	68.6	10.2	90	82.5	2.9	100	28.3	26.0	101
HELENA			DELTAPINE 16						98 PERCENT											
SLM	41	34	92	27	5.4	3.3	90	90	22	15	59	67.6	10.4	89	81.9	3.3	97	31.0	25.6	94
SLM	41	35	103	35	6.8	5.2	100	90	17	12	62	69.9	9.9	92	81.9	3.2	97	27.7	26.0	103
SLM	41	35	104	34	6.7	4.9	100	80	17	12	63	67.9	10.0	88	83.0	3.1	100	27.8	25.8	102
HELENA			STONEVILLE 213						100 PERCENT											
LM	51	34	102	32	6.2	4.6	120	90	13	10	65	64.8	10.4	84	81.4	3.9	93	28.0	23.3	91
SLM	41	35	100	29	6.3	4.4	100	90	19	13	64	69.2	10.3	92	83.3	3.0	101	28.2	26.1	102
LM	51	35	100	31	6.5	4.6	100	80	21	17	61	66.9	9.9	86	82.2	3.4	97	29.1	24.9	95
HUGHES			STONEVILLE 213						100 PERCENT											
LM	51	34	92	29	5.7	3.8	110	90	29	22	64	67.8	11.3	93	81.8	3.6	95	28.7	25.9	100
LM	51	34	89	27	6.1	4.2	90	80	20	16	55	67.6	10.6	89	81.9	3.5	96	28.1	27.2	107
LM	51	35	98	31	6.6	4.6	90	70	28	21	58	68.0	10.3	89	82.6	3.3	98	28.5	25.1	97
LEACHVILLE			BRYCOT #4						100 PERCENT											
SLM	41	35	105	35	6.4	4.2	100	80	18	16	62	67.2	10.5	88	81.1	3.4	94	27.1	25.4	101
SLM	41	34	104	33	6.2	4.4	110	80	19	18	66	69.9	10.5	94	82.7	3.0	100	29.8	26.4	100
SLM	41	34	95	29	6.2	4.5	90	60	22	18	52	68.7	9.8	89	82.3	3.4	97	28.8	25.0	96

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL ARKANSAS														
LEACHVILLE			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.12	47	4.4	85	25	7.0	1.9	3.0	2	3	98	5.3
SLM	41	34	1.10	45	4.7	82	22	6.6	1.9	2.6	2	3	97	7.2
SLM	41	35	1.06	44	3.8	79	21	7.4	2.3	3.0	2	2	99	5.5
LEPANTO			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.13	46	4.6	85	23	7.2	1.9	3.4	2	3	99	5.1
SLM	41	35	1.14	45	4.6	82	23	7.3	1.8	2.8	2	3	100	7.0
SLM	41	35	1.13	44	3.8	82	22	7.9	2.1	3.5	1	2	102	5.5
NEWPORT			STONEVILLE 213				95 PERCENT							
M	31	34	1.07	46	4.8	85	23	6.4	0.6	1.4	2	3	100	6.1
SLM	41	35	1.11	47	5.0	81	21	6.8	1.1	1.9	2	3	97	5.1
SLM	41	35	1.10	47	4.9	83	21	7.1	1.4	2.8	1	2	101	4.9
OSCEOLA			STONEVILLE 7A				100 PERCENT							
SLM	41	35	1.11	43	4.2	86	22	6.2	2.0	3.0	2	3	100	5.6
SLM	41	34	1.10	44	4.2	84	21	5.6	2.9	5.0	2	3	97	8.3
SLM	41	34	1.09	43	4.3	85	20	5.9	2.3	3.6	2	2	99	7.2
PROCTOR			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.08	43	4.3	79	21	7.4	2.0	2.6	2	3	97	5.8
SLM	41	34	1.07	44	4.7	73	21	7.4	2.1	3.4	2	3	97	5.6
SLM	41	34	1.09	44	4.7	80	21	7.1	2.2	3.2	2	3	99	6.1
VICTORIA			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.13	46	4.7	86	25	6.9	2.1	3.6	2	3	98	5.6
SLM	41	35	1.11	45	4.3	84	23	6.4	2.0	3.0	2	3	100	7.5
LM	51	35	1.09	43	2.9	81	23	7.4	4.1	5.7	2	2	96	8.9
WALNUT RIDGE			REX SMOOTHLEAF 66				75 PERCENT							
M	31	34	1.10	46	4.7	83	24	6.6	1.1	1.8	2	3	101	4.6
M	31	34	1.09	45	4.5	81	20	6.9	0.4	2.2	1	3	101	4.9 1/
SLM	41	34	1.08	45	4.0	78	21	7.4	1.4	2.5	1	3	101	5.2

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
ARKANSAS																				
LEACHVILLE			STONEVILLE 213						100 PERCENT											
SLM		41 35	116	42	6.8	5.1	110	80	25	21	62	69.2	10.7	93	81.0	3.3	95	28.6	26.0	101
SLM		41 34	104	34	6.8	4.9	130	80	19	15	71	69.9	11.2	97	82.8	3.1	100	29.1	26.3	101
SLM		41 35	97	29	6.4	4.7	100	70	23	21	55	68.4	9.9	89	82.4	3.5	97	28.3	26.0	101
LEPANTO			DELTAPINE 16						100 PERCENT											
SLM		41 35	114	40	6.8	4.8	120	90	16	12	65	68.0	9.8	88	83.2	3.1	101	28.5	26.8	104
SLM		41 35	111	37	7.2	4.9	120	90	16	13	67	71.2	10.3	96	82.5	3.5	97	28.7	23.3	90
SLM		41 35	108	34	7.1	5.0	110	80	17	15	67	70.5	9.7	93	83.6	2.8	103	28.6	25.1	97
NEWPORT			STONEVILLE 213						95 PERCENT											
M		31 34	100	32	6.0	4.5	130	100	6	5	57	69.5	10.8	94	81.9	3.7	95	28.8	23.9	92
SLM		41 35	96	28	6.0	4.1	110	80	21	11	56	67.3	10.4	88	82.3	3.2	98	28.1	26.4	103
SLM		41 35	98	29	6.1	4.2	110	90	9	8	53	68.9	10.1	91	82.0	3.5	96	29.1	25.7	99
OSCEOLA			STONEVILLE 7A						100 PERCENT											
SLM		41 35	100	33	5.5	3.7	100	80	35	24	59	70.9	10.3	96	82.9	3.1	100	29.6	25.2	96
SLM		41 34	97	29	6.2	4.4	100	80	23	19	61	69.8	10.8	95	82.7	3.1	99	29.4	25.9	99
SLM		41 34	90	23	5.6	3.7	100	70	18	16	50	69.7	10.3	93	81.0	3.1	95	29.1	25.7	99
PROCTOR			STONEVILLE 213						100 PERCENT											
SLM		41 34	96	31	6.8	4.6	90	70	30	22	63	69.2	11.1	95	83.2	3.2	100	28.5	25.7	100
SLM		41 34	83	21	6.2	4.0	90	70	21	19	48	68.7	10.6	92	83.4	3.1	101	27.3	25.5	101
SLM		41 34	84	23[1/]	6.0	4.5	90	80	19	15	47	70.6	10.3	95	82.8	3.3	99	28.9	25.2	97
VICTORIA			STONEVILLE 213						100 PERCENT											
SLM		41 35	117	41	6.5	4.8	110	90	24	20	63	68.1	11.0	92	81.1	3.4	94	27.6	26.7	106
SLM		41 35	112	38	7.1	5.1	100	90	18	15	70	69.7	10.4	93	81.4	3.8	94	28.1	24.3	95
LM		51 35	107	34	7.3	5.2	70	60	39	33	67	67.6	10.1	88	82.0	3.9	95	29.2	24.6	94
WALNUT RIDGE			REX SMOOTHLEAF 66						75 PERCENT											
M		31 34	104	36	6.2	4.5	120	80	17	14	63	69.2	10.5	93	81.6	3.3	96	26.8	25.5	102
M		31 34	94	27	6.2	4.3	120	90	15	10	59	69.3	10.4	93	82.6	3.1	99	29.2	26.7	102
SLM		41 34	95	28	6.1	4.3	110	80	15	9	58	70.9	10.1	95	81.8	3.4	96	28.7	25.1	97

1/ End breakage too high to spin 50s yarn. 44's yarn spun and strength adjusted to equivalent of 50s.

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Grayness	Yellowness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
ARKANSAS														
WILSON			DELTAPINE 16				100 PERCENT							
M	31	35	1.11	45	4.4	81	22	7.5	1.2	1.6	1	2	101	4.2
SLM	41	35	1.13	44	4.0	79	24	7.8	2.4	3.1	1	2	100	6.3
SLM	41	35	1.12	44	3.4	80	22	8.3	2.6	3.8	1	2	100	5.7
WYNNE			DELTAPINE 16				100 PERCENT							
SLM	41	34	1.07	45	4.5	85	24	8.0	1.8	2.4	2	3	98	5.6
SLM	41	34	1.10	45	4.9	85	24	7.4	2.9	4.0	2	3	96	5.8
SLM	41	34	1.07	47	5.4	79	23	8.4	2.0	2.9	2	3	99	5.2
LOUISIANA														
ALEXANDRIA			STONEVILLE 213				75 PERCENT							
SLM	41	34	1.09	46	4.9	76	21	6.3	1.7	3.0	4	4	89	7.8
SLM	41	34	1.08	44	4.5	75	20	7.1	1.8	2.9	3	3	94	5.3
LM	51	34	1.07	43	4.6	77	20	6.8	1.2	2.4	4	3	86	4.8
BUNKIE			DELTAPINE 45A				80 PERCENT							
SLM	41	34	1.08	48	4.5	80	20	7.2	1.6	2.4	3	3	94	4.6
LM	51	34	1.07	46	4.3	75	22	7.3	2.5	3.5	5	2	84	6.2
LM	51	34	1.08	45	4.5	75	19	7.0	1.6	3.1	4	3	86	7.0
LAKE PROVIDENCE			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.15	47	4.7	82	24	7.8	1.8	2.5	1	2	102	4.2
SLM	41	35	1.13	46	4.7	80	23	8.3	2.7	3.4	1	2	100	6.3
SLM	41	35	1.13	45	4.2	79	21	8.0	2.0	3.3	2	2	99	3.9
LAKE PROVIDENCE			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.11	47	5.0	86	23	6.9	2.2	2.9	2	3	98	6.0
SLM	41	34	1.08	46	4.7	82	23	6.8	1.8	2.9	2	3	98	5.8
LM	51	34	1.08	44	4.0	79	21	7.2	2.2	3.5	3	2	95	5.7
MONROE			DELTAPINE 16				100 PERCENT							
SLM LT SP	42	35	1.14	44	4.6	80	22	7.7	2.3	3.3	3	4	92	5.8
SLM	41	35	1.12	45	4.5	78	22	8.0	1.7	2.6	3	3	95	5.1
SLM LT SP	42	35	1.14	44	4.5	77	21	7.3	1.0	2.6	3	3	92	4.7

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
ARKANSAS																				
WILSON			DELTAPINE 16						100 PERCENT											
M	31	35	114	41	7.1	5.3	130	90	14	11	57	71.0	10.4	96	81.2	3.1	96	28.2	26.6	104
SLM	41	35	117	42	7.1	5.7	110	80	19	13	77	71.7	10.0	96	83.0	3.3	99	28.7	23.6	91
SLM	41	35	114	37	7.5	5.3	90	80	18	12	70	70.7	9.5	93	82.9	3.2	99	28.4	26.0	101
WYNNE			DELTAPINE 16						100 PERCENT											
SLM	41	34	110	37	7.0	5.1	120	90	21	15	62	70.5	10.9	97	83.0	3.2	100	27.7	25.8	102
SLM	41	34	101	33	6.2	4.8	110	90	17	15	64	68.6	10.5	91	82.3	3.2	98	28.0	27.1	106
SLM	41	34	98	29	6.5	4.3	110	90	12	10	57	68.6	10.7	92	83.1	3.0	101	28.3	25.7	100
LOUISIANA																				
ALEXANDRIA			STONEVILLE 213						75 PERCENT											
SLM	41	34	85	24	6.0	3.7	110	90	19	17	53	65.3	10.9	86	82.8	3.2	99	29.8	26.4	100
SLM	41	34	79	22	5.8	3.9	100	70	40	25	45	65.5	10.1	84	83.3	3.2	100	29.2	25.7	98
LM	51	34	77	21	5.4	3.9	90	60	26	29	44	64.3	9.9	82	81.9	3.5	96	29.9	25.0	94
BUNKIE			DELTAPINE 45A						80 PERCENT											
SLM	41	34	96	32	6.7	4.7	120	90	15	13	67	68.3	10.1	89	82.8	3.1	100	27.5	25.6	101
LM	51	34	86	27	6.2	4.3	100	70	20	18	54	62.2	9.8	78	82.3	3.2	98	29.2	25.1	96
LM	51	34	84	25	5.9	4.0	100	80	14	13	56	62.9	10.0	80	82.1	3.6	96	29.4	26.3	100
LAKE PROVIDENCE			DELTAPINE 16						100 PERCENT											
SLM	41	35	118	43	7.1	5.2	110	100	20	12	75	71.9	10.5	98	82.9	3.2	99	27.9	26.4	104
SLM	41	35	111	39	7.2	5.4	120	100	14	8	77	69.8	9.8	92	83.4	2.7	103	27.8	26.5	104
SLM	41	35	109	35	7.4	5.3	80	70	21	20	68	68.9	9.5	89	83.2	3.1	101	27.6	26.2	104
LAKE PROVIDENCE			STONEVILLE 213						100 PERCENT											
SLM	41	35	107	38	6.2	4.5	100	90	33	21	74	70.2	10.7	96	82.7	3.2	99	30.0	26.4	100
SLM	41	34	95	30	6.0	4.6	90	80	17	16	56	68.6	10.2	90	83.7	3.2	101	28.7	26.0	101
LM	51	34	94	28	6.1	4.2	90	70	24	19	58	67.8	10.0	88	81.6	3.2	96	29.4	24.9	95
MONROE			DELTAPINE 16						100 PERCENT											
SLM LT SP	42	35	94	30	6.5	4.9	80	60	29	26	55	65.3	10.8	86	83.2	3.5	99	29.0	23.9	92
SLM	41	35	96	30	6.4	4.9	90	70	47	27	59	66.7	10.0	86	83.0	2.9	101	29.1	25.4	97
SLM LT SP	42	35	93	28	6.5	4.4	90	60	30	26	58	65.1	10.3	84	82.5	3.3	98	28.5	26.1	101

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
LOUISIANA														
OAK GROVE			DELTAPINE 16				100 PERCENT							
M	31	34	1.07	47	5.4	86	22	7.3	0.9	1.0	2	3	98	4.0
SLM LT SP	42	34	1.11	46	5.1	81	23	7.9	1.2	2.4	3	3	96	6.4
SLM LT SP	42	34	1.08	44	4.0	83	21	7.6	1.5	2.4	3	3	94	3.4
SHREVEPORT			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.12	46	4.9	81	22	7.9	1.0	1.6	2	4	98	4.9
SLM	41	34	1.13	44	4.7	76	22	8.5	1.7	3.2	2	3	100	5.2
SLM	41	35	1.11	42	3.5	78	20	8.5	2.4	3.8	1	3	100	4.8
SICILY ISLAND			STONEVILLE 213				100 PERCENT							
LM+	50	35	1.12	46	4.6	80	23	6.6	2.9	4.0	2	3	97	6.0
LM	51	34	1.08	46	4.6	80	20	7.0	2.3	3.8	4	3	89	6.7
LM	51	34	1.10	46	4.9	78	21	7.2	2.6	3.7	4	3	88	6.4
MISSISSIPPI														
ARCOLA			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.14	46	4.7	85	23	7.9	1.5	1.9	1	2	100	4.0
SLM	41	35	1.14	44	4.4	78	23	7.7	1.6	2.5	1	2	100	4.5
SLM	41	36	1.14	44	4.3	79	22	8.0	1.2	2.3	2	2	99	4.8
BELZONI			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.12	44	4.5	84	22	8.0	2.3	3.2	2	2	98	5.1
SLM	41	35	1.14	43	4.1	79	22	8.0	2.4	3.5	2	1	97	7.2
LM	51	34	1.12	42	3.8	77	21	8.3	2.4	3.8	3	2	93	6.1
BRUCE			STONEVILLE 213				90 PERCENT							
SLM	41	34	1.09	46	4.5	83	22	6.9	1.6	1.8	2	3	99	4.3
SLM	41	34	1.05	45	4.6	80	21	6.9	1.9	2.7	2	3	98	5.0
SLM	41	34	1.06	45	4.6	79	21	8.0	1.8	2.8	2	2	98	4.5
CLARKSDALE			STONEVILLE 213				100 PERCENT							
LM	51	34	1.10	45	5.0	82	23	6.8	3.0	3.7	3	3	94	6.1
LM	51	34	1.10	45	4.7	85	21	6.9	4.5	5.6	3	3	93	6.6
LM	51	34	1.10	44	3.7	81	21	7.3	3.6	5.6	3	2	90	6.1

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
LOUISIANA																				
OAK GROVE			DELTAPINE 16					100 PERCENT												
M	31	34	105	35	6.3	4.3	130	100	11	7	65	69.7	10.9	95	82.2	3.3	97	28.6	26.7	104
SLM LT SP	42	34	103	34	6.6	4.7	130	100	10	8	64	65.1	10.4	84	82.7	2.9	100	28.6	25.6	99
SLM LT SP	42	34	101	31	6.5	4.6	120	90	14	11	56	62.7	10.1	80	81.3	3.9	93	28.3	25.1	98
SHREVEPORT			DELTAPINE 16					100 PERCENT												
SLM	41	35	106	37	6.7	4.6	100	70	23	21	66	69.9	10.8	95	82.5	3.4	98	27.6	26.7	106
SLM	41	34	95	29	6.6	4.7	80	70	39	24	57	68.3	10.4	90	83.9	3.1	102	27.8	26.0	102
SLM	41	35	96	32	6.6	5.2	90	60	25	20	63	68.4	10.0	89	82.8	3.3	99	27.9	25.8	101
SICILY ISLAND			STONEVILLE 213					100 PERCENT												
LM+	50	35	99	32	6.6	4.5	110	80	23	14	57	67.9	11.1	92	82.5	3.3	98	27.3	24.0	95
LM	51	34	91	25	6.0	4.0	110	80	22	18	58	65.8	10.6	86	82.4	3.5	97	29.1	26.6	102
LM	51	34	92	27	6.3	4.5	100	80	21	14	52	65.2	10.5	85	82.1	3.7	96	28.9	24.8	95
MISSISSIPPI																				
ARCOLA			DELTAPINE 16					100 PERCENT												
SLM	41	35	119	42	7.0	5.2	120	90	13	12	72	70.4	10.3	95	81.8	3.1	97	28.7	26.1	101
SLM	41	35	113	38	7.2	5.3	110	80	18	14	70	71.1	10.2	96	83.5	3.3	100	28.5	24.1	93
SLM	41	36	110	37	7.2	5.2	100	80	10	9	71	69.8	9.6	91	82.6	3.0	100	29.5	26.0	99
BELZONI			DELTAPINE 16					100 PERCENT												
SLM	41	35	113	42	7.3	5.3	110	90	18	11	66	71.1	10.3	96	82.1	3.1	98	27.4	25.1	100
SLM	41	35	115	38	7.3	5.3	120	90	11	6	67	71.4	9.8	95	82.5	3.2	99	28.5	23.5	91
LM	51	34	106	35	6.9	5.1	110	80	17	11	71	67.3	8.9	85	82.8	3.2	99	29.6	25.8	98
BRUCE			STONEVILLE 213					90 PERCENT												
SLM	41	34	112	37	6.5	4.8	120	100	12	10	54	68.7	10.2	90	82.5	3.2	99	29.8	26.3	100
SLM	41	34	97	31	6.5	4.8	110	80	16	10	65	70.7	10.5	96	82.5	3.4	98	28.6	22.9	88
SLM	41	34	95	27	6.5	4.4	110	90	13	9	61	72.4	9.7	96	82.2	3.1	98	30.3	24.7	92
CLARKSDALE			STONEVILLE 213					100 PERCENT												
LM	51	34	99	33	6.1	4.3	110	80	26	19	66	69.4	10.8	94	82.2	3.4	97	28.3	25.8	101
LM	51	34	96	29	6.4	4.6	100	70	23	16	59	68.3	10.2	90	81.8	3.4	96	28.9	25.8	99
LM	51	34	103	33	6.7	4.8	90	70	30	24	59	65.5	9.9	84	81.6	3.8	94	28.6	25.0	97

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL MISSISSIPPI														
EDWARDS			STONEVILLE 213				85 PERCENT							
SLM	41	34	1.10	47	4.9	85	22	6.6	2.3	3.1	2	4	98	5.4
SLM	41	34	1.07	47	4.9	82	22	6.6	1.7	2.5	3	3	96	6.5
LM	51	34	1.05	46	4.8	78	21	6.9	2.0	2.7	3	3	93	7.4
FOREST			DELTAPINE 16				95 PERCENT							
SLM	41	34	1.08	45	4.8	81	21	7.0	1.6	2.3	2	3	96	4.8
SLM	41	34	1.09	44	4.6	82	21	6.5	1.3	2.7	2	2	100	6.4
SLM LT SP	42	34	1.09	43	4.4	79	21	7.9	1.7	2.8	3	3	96	5.9
GREENWOOD			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.09	45	5.0	78	23	6.3	3.2	4.0	3	3	95	5.6
LM	51	34	1.09	44	4.8	82	22	6.4	2.5	3.3	3	3	95	6.6
LM	51	34	1.08	44	3.8	82	22	7.0	2.4	3.5	3	2	95	6.1
GUNNISON			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.15	44	4.2	83	22	8.0	1.5	2.7	2	3	100	5.4
SLM	41	35	1.12	46	4.5	80	24	7.8	1.4	2.3	2	2	100	6.7
SLM	41	35	1.15	44	4.2	77	22	8.2	1.3	2.5	2	2	100	5.1
HOLLY SPRINGS			DELTAPINE 16				90 PERCENT							
SLM	41	35	1.09	47	4.7	83	23	8.2	1.6	2.4	2	3	97	5.6
SLM	41	35	1.10	43	3.5	79	23	8.8	2.2	4.1	1	2	102	7.8
LM	51	35	1.11	46	4.1	78	22	8.5	2.8	4.4	2	2	100	6.7
INDIANOLA			DELTAPINE 16				100 PERCENT							
SLM	41	34	1.09	45	4.4	86	23	7.7	2.8	3.7	1	2	100	6.1
SLM	41	35	1.11	44	4.7	81	24	6.9	2.4	3.6	2	2	95	5.8
LM	51	34	1.06	41	3.4	82	21	7.3	3.4	4.8	3	3	92	7.5
INDIANOLA			DIXIE KING III				100 PERCENT							
LM	51	34	1.07	47	4.6	92	22	5.7	4.7	5.4	3	3	91	7.6
LM	51	34	1.09	48	4.7	85	24	6.0	3.9	5.0	3	2	90	6.4
SLM	41	35	1.08	48	4.6	82	22	5.9	3.3	4.5	4	2	88	6.5

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name Code	32d In.		Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL MISSISSIPPI																				
EDWARDS		STONEVILLE 213						85 PERCENT												
SLM	41	34	103	33	6.2	4.4	130	90	15	12	58	68.6	11.4	95	82.5	3.3	98	29.1	26.3	101
SLM	41	34	94	30	6.2	4.4	120	90	9	8	58	68.1	10.9	92	81.8	3.1	97	30.1	26.6	100
LM	51	34	87	24	6.0	3.8	100	80	19	14	53	66.4	10.7	87	81.8	3.4	96	28.3	26.1	102
FOREST		DELTAPINE 16						95 PERCENT												
SLM	41	34	100	33	6.7	4.7	120	90	15	10	64	69.1	10.6	93	81.8	3.3	96	28.5	25.7	100
SLM	41	34	97	31	6.5	4.7	120	90	18	6	59	68.9	10.5	92	83.1	3.2	100	29.2	26.0	100
SLM LT SP	42	34	91	27	6.5	4.3	100	70	11	8	54	68.4	10.4	90	83.4	3.2	101	29.1	26.2	101
GREENWOOD		STONEVILLE 213						100 PERCENT												
SLM	41	34	102	34	6.3	4.8	110	70	25	17	60	68.6	10.8	93	82.1	3.3	97	27.4	25.5	101
LM	51	34	97	30	6.3	4.3	90	70	19	13	57	69.4	10.9	95	81.0	3.8	93	28.1	23.7	93
LM	51	34	104	32	6.8	4.7	100	80	23	16	61	67.8	10.5	90	82.9	3.4	99	29.2	25.9	99
GUNNISON		DELTAPINE 16						100 PERCENT												
SLM	41	35	115	42	7.2	5.7	100	70	22	21	77	68.7	10.1	90	81.4	3.0	97	29.7	26.3	100
SLM	41	35	106	35	7.0	5.3	110	80	24	10	72	70.5	10.2	94	82.4	2.9	99	27.6	25.7	102
SLM	41	35	104	34	7.1	5.0	100	70	19	11	67	69.5	9.1	89	82.2	3.2	98	28.8	26.1	101
HOLLY SPRINGS		DELTAPINE 16						90 PERCENT												
SLM	41	35	108	37	6.6	4.9	130	90	21	12	68	69.7	10.7	94	82.1	3.5	96	28.7	26.1	101
SLM	41	35	110	36	7.3	5.2	100	90	21	19	67	71.3	9.9	95	83.5	3.1	101	28.3	25.9	101
LM	51	35	104	32	6.9	5.0	110	80	21	17	65	70.3	10.1	94	82.3	3.2	98	28.7	25.1	97
INDIANOLA		DELTAPINE 16						100 PERCENT												
SLM	41	34	110	38	6.6	4.8	120	100	13	9	59	69.7	10.5	94	83.1	3.3	100	28.8	26.0	100
SLM	41	35	100	31	6.3	4.4	120	90	14	10	60	70.3	10.3	94	82.5	3.4	98	29.1	24.2	93
LM	51	34	96	30	6.3	4.5	100	70	19	14	59	64.5	10.1	83	82.5	3.6	97	29.1	25.3	97
INDIANOLA		DIXIE KING III						100 PERCENT												
LM	51	34	112	38	6.1	4.3	120	90	23	15	60	67.4	11.0	90	82.2	3.6	96	29.7	25.5	97
LM	51	34	112	37	6.2	4.5	100	90	20	15	67	63.6	10.4	82	83.0	3.1	100	28.6	25.4	98
SLM	41	35	106	35	6.1	4.5	100	80	20	15	61	65.1	9.7	83	82.1	3.4	97	30.1	24.4	91

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
MISSISSIPPI														
INDIANOLA			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.11	46	5.3	84	22	6.2	2.2	2.7	3	3	95	5.6
SLM	41	35	1.08	45	4.9	79	21	6.2	1.6	2.4	2	3	97	7.2
SLM	41	34	1.09	46	5.1	83	21	7.0	1.4	2.5	2	3	97	5.2
LAKE CORMORANT			DELTAPINE 16				100 PERCENT							
SLM	41	36	1.14	44	4.1	80	22	7.6	2.3	3.0	2	3	100	6.9
SLM	41	36	1.14	45	4.0	78	20	8.5	2.1	2.7	1	2	101	5.2
SLM	41	36	1.13	44	4.2	78	21	8.7	1.4	2.8	1	2	102	5.2
LELAND			STONEVILLE 213				100 PERCENT							
LM	51	34	1.14	47	4.9	83	23	6.6	3.4	4.2	3	3	95	7.5
LM	51	34	1.13	45	4.4	79	22	7.4	3.5	5.3	3	2	93	7.1
LM	51	35	1.10	45	4.5	76	21	7.4	4.4	5.7	4	2	88	7.9
LYON			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.10	45	5.0	84	23	6.7	2.0	2.7	2	3	99	4.9
SLM	41	34	1.10	45	5.0	84	22	6.3	2.1	3.4	3	3	95	6.4
LM	51	35	1.07	45	4.3	80	21	6.9	2.0	3.1	3	2	94	6.3
MACON			DELTAPINE 16				95 PERCENT							
SLM	41	35	1.14	45	4.4	79	23	7.8	2.2	3.3	2	2	99	4.7
SLM	41	35	1.09	44	4.2	81	22	8.0	1.7	2.7	1	3	100	6.0
SLM	41	35	1.09	46	4.6	80	22	8.3	2.0	2.8	2	2	99	4.8
PANTHER BURN			DELTAPINE 16				100 PERCENT							
LM	51	35	1.15	44	4.6	80	22	7.1	2.7	4.0	3	2	92	6.6
LM	51	35	1.15	45	4.1	78	22	8.3	3.1	5.1	2	2	99	6.4
LM	51	35	1.14	44	3.8	76	21	8.1	4.1	5.1	2	1	97	5.0
SCOTT			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.12	43	4.3	81	23	7.4	1.9	2.7	2	2	100	5.3
SLM	41	35	1.14	44	4.0	82	22	8.0	2.3	3.1	2	2	99	4.9
LM	51	35	1.13	43	3.8	80	22	8.0	2.0	4.4	3	2	95	6.7

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL MISSISSIPPI																				
INDIANOLA				STONEVILLE 213						100 PERCENT										
SLM		41 34	102	31	5.8	4.0	120	90	27	22	59	68.0	10.8	91	81.4	3.3	96	27.0	25.8	103
SLM		41 35	98	30	5.8	4.1	120	90	10	8	57	69.8	10.6	94	82.2	3.7	96	28.7	23.6	91
SLM		41 34	100	31	6.6	4.5	110	90	13	9	59	70.0	10.5	94	81.3	3.1	96	28.9	25.9	100
LAKE CORMORANT				DELTAPINE 16						100 PERCENT										
SLM		41 36	111	38	7.2	5.4	120	90	13	12	71	70.3	10.8	96	85.8	3.6	105	28.3	24.0	93
SLM		41 36	105	35	7.5	4.9	110	80	21	12	71	70.9	9.9	94	83.5	3.0	102	28.3	25.7	100
SLM		41 36	102	33	6.8	4.9	100	80	11	9	61	70.5	9.4	92	82.2	3.2	98	28.1	26.3	103
LELAND				STONEVILLE 213						100 PERCENT										
LM		51 34	106	37	6.4	4.8	110	90	23	18	69	70.7	10.8	97	83.1	3.1	100	27.2	26.0	104
LM		51 34	104	32	6.9	4.8	100	70	25	21	61	69.1	10.0	91	84.2	3.0	103	29.1	25.5	98
LM		51 35	101	31	6.6	4.9	100	70	23	18	62	66.5	10.0	86	82.1	3.3	97	29.5	25.5	97
LYON				STONEVILLE 213						100 PERCENT										
SLM		41 34	104	36	6.4	4.2	110	90	15	15	56	69.5	9.9	91	81.6	3.1	97	29.9	25.9	98
SLM		41 34	98	31	6.3	4.8	130	90	10	8	59	69.9	10.2	93	82.4	3.1	99	29.2	25.9	99
LM		51 35	94	28	6.2	4.4	100	70	26	19	50	68.4	9.6	88	82.3	3.4	97	30.1	25.2	95
MACON				DELTAPINE 16						95 PERCENT										
SLM		41 35	114	41	7.0	5.3	110	90	16	13	73	72.3	10.4	98	82.7	3.2	99	28.3	26.6	104
SLM		41 35	107	35	6.7	5.0	130	100	12	9	68	72.1	10.3	98	81.8	3.8	94	28.5	23.2	90
SLM		41 35	101	31	6.8	5.0	120	90	8	9	61	70.8	9.9	94	83.2	3.2	100	28.4	26.3	102
PANTHER BURN				DELTAPINE 16						100 PERCENT										
LM		51 35	105	35	6.8	5.2	100	70	30	21	67	69.0	10.2	91	81.6	3.6	95	28.3	24.2	94
LM		51 35	108	36	7.3	5.2	100	70	22	19	67	69.4	9.9	91	83.0	2.9	101	28.2	26.6	104
LM		51 35	109	36	7.7	5.4	90	70	20	15	66	70.0	9.1	90	83.2	3.1	101	28.5	26.0	101
SCOTT				DELTAPINE 16						100 PERCENT										
SLM		41 35	110	37	7.1	5.3	90	70	22	18	69	71.7	10.2	97	81.4	3.7	94	28.6	24.0	93
SLM		41 35	108	35	7.2	5.2	100	80	19	19	71	69.2	9.9	91	83.2	2.9	101	29.0	25.6	98
LM		51 35	103	33	6.8	4.9	90	60	25	21	62	68.7	9.3	88	82.1	2.9	99	30.1	24.5	92

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
MISSISSIPPI														
TRIBBETT			STONEVILLE 7A				100 PERCENT							
SLM	41	35	1.13	46	4.8	97	22	5.5	2.6	3.3	2	3	98	5.9
SLM	41	35	1.11	45	4.9	91	23	5.0	1.9	3.0	2	3	99	7.1
SLM	41	34	1.12	46	4.7	90	23	6.0	2.5	3.5	2	2	96	6.3
LM	51	35	1.11	45	4.4	91	22	5.1	2.7	4.2	4	2	86	6.1
TUNICA			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.10	45	4.6	83	23	6.4	1.5	2.7	2	3	97	5.1
SLM	41	35	1.08	46	5.0	84	22	6.8	2.1	3.0	2	3	98	6.0
SLM	41	35	1.08	45	4.5	78	21	7.2	2.1	3.5	2	3	99	5.7
MISSOURI														
BELL CITY			STONEVILLE 213				100 PERCENT							
M LT SP	32	34	1.09	46	4.5	84	23	7.2	1.3	2.2	2	3	99	4.8
SLM	41	34	1.06	44	4.0	80	21	6.8	1.5	2.4	2	3	100	6.5
SLM	41	34	1.05	44	4.5	83	21	6.8	1.5	2.4	1	3	101	4.5
CAMPBELL			STONEVILLE 213				98 PERCENT							
SLM	41	34	1.08	47	4.5	91	23	6.6	2.3	3.0	2	3	99	5.8
SLM	41	34	1.05	45	4.6	86	22	6.5	1.8	2.7	2	3	100	5.2
SLM	41	34	1.10	45	4.3	79	21	7.5	1.7	2.5	1	2	102	5.1
PORTAGEVILLE			STONEVILLE 213				95 PERCENT							
SLM	41	34	1.08	47	4.9	85	21	6.8	1.1	1.7	2	3	99	4.7
SLM	41	34	1.07	44	4.5	84	21	6.7	1.3	2.3	2	3	100	4.8
SLM	41	34	1.05	46	4.9	80	20	6.8	1.3	2.3	2	3	100	5.0
SENATH			AUBURN M				100 PERCENT							
SLM	41	34	1.09	44	4.0	78	21	7.2	2.5	3.3	3	3	96	4.6
SLM	41	34	1.09	45	3.9	79	20	7.0	1.8	2.7	2	3	99	5.6
SLM LT SP	42	34	1.05	42	3.7	77	19	7.0	1.7	3.0	2	3	96	6.5
STEELE			STONEVILLE 213				95 PERCENT							
SLM	41	34	1.09	45	4.9	83	23	6.6	2.1	3.0	2	3	98	5.3
SLM	41	34	1.07	45	4.7	79	23	7.2	2.5	3.4	1	3	102	5.5
SLM	41	35	1.08	46	4.6	80	21	7.3	2.3	3.3	1	2	101	5.1

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
MISSISSIPPI																				
TRIBBETT			STONEVILLE 7A						100 PERCENT											
SLM	41	35	105	33	6.1	3.9	110	80	18	15	61	70.3	10.6	95	81.7	3.2	97	29.0	26.7	103
SLM	41	35	103	31	5.7	3.9	130	90	13	11	65	69.8	10.4	94	82.1	3.1	98	29.4	25.9	99
SLM	41	34	99	28	5.7	3.7	100	70	18	18	57	68.0	9.8	88	82.8	3.0	100	29.6	25.4	96
LM	51	35	97	29	5.4	3.7	100	70	21	15	59	65.0	9.6	83	81.7	3.9	94	30.4	24.8	92
TUNICA			STONEVILLE 213						100 PERCENT											
SLM	41	34	96	29	6.0	4.1	100	70	17	13	58	69.6	10.6	94	83.1	3.5	99	30.4	24.1	90
SLM	41	35	91	26	6.1	4.3	110	80	16	15	51	70.5	10.8	96	82.6	3.2	99	29.5	25.7	98
SLM	41	35	93	27	6.3	4.4	90	80	19	13	52	69.6	10.0	92	80.7	3.0	95	29.5	25.2	96
MISSOURI																				
BELL CITY			STONEVILLE 213						100 PERCENT											
M LT SP	32	34	101	36	6.9	4.8	100	70	25	14	63	68.7	10.7	92	82.0	3.4	97	28.1	25.0	98
SLM	41	34	98	31	7.3	5.4	110	80	13	7	59	69.7	10.7	94	83.5	3.2	101	28.9	25.6	99
SLM	41	34	93	31	6.7	4.9	90	70	20	15	57	69.8	10.3	93	83.1	3.3	100	27.7	26.2	103
CAMPBELL			STONEVILLE 213						98 PERCENT											
SLM	41	34	107	35	6.4	4.4	120	90	22	13	58	69.8	11.0	96	82.1	3.3	97	27.9	26.6	105
SLM	41	34	96	28	6.2	4.2	110	90	22	17	55	70.0	10.8	96	82.2	3.7	96	28.1	24.1	94
SLM	41	34	101	32	6.9	4.8	110	90	24	19	60	70.3	10.4	95	83.9	3.0	103	27.4	26.6	106
PORTAGEVILLE			STONEVILLE 213						95 PERCENT											
SLM	41	34	96	31	6.2	4.2	120	90	14	7	50	68.7	11.1	94	81.7	3.2	97	28.4	25.9	101
SLM	41	34	93	28	6.3	4.3	90	70	21	16	53	69.9	10.7	95	82.7	3.4	98	28.8	23.7	91
SLM	41	34	92	27	6.7	4.5	110	80	11	10	50	69.7	10.5	94	82.1	3.3	97	28.2	26.2	102
SENATH			AUBURN M						100 PERCENT											
SLM	41	34	103	34	6.6	4.6	100	70	37	30	62	67.4	11.2	91	82.7	3.4	98	28.4	26.4	103
SLM	41	34	96	30	6.5	4.7	90	70	36	30	61	69.4	11.0	95	84.1	3.4	101	28.1	23.9	93
SLM LT SP	42	34	86	25	6.6	4.3	90	70	17	14	51	66.9	11.2	90	82.0	3.2	97	28.8	26.0	100
STEELE			STONEVILLE 213						95 PERCENT											
SLM	41	34	100	30	6.2	4.3	110	80	12	10	59	70.4	10.6	96	82.7	3.7	97	28.4	24.6	96
SLM	41	34	98	29	6.3	4.3	100	90	24	13	53	70.4	10.5	95	82.0	3.1	98	28.6	27.4	106
SLM	41	35	99	30	6.3	4.6	100	90	14	8	59	69.9	10.2	93	81.9	3.4	96	28.2	26.7	104

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
TENNESSEE														
DYERSBURG			STONEVILLE 213				90 PERCENT							
SLM	41	34	1.07	46	4.8	83	22	6.7	1.6	2.2	2	4	98	3.7
SLM	41	34	1.07	47	4.8	80	22	6.8	1.0	1.6	2	3	99	5.7
SLM	41	33	1.04	47	4.6	79	20	7.0	1.0	1.8	2	3	99	4.8
GADSDEN			DELTAPINE 16				90 PERCENT							
M	31	34	1.08	47	4.6	86	22	7.8	1.2	2.5	1	3	101	4.7
M	31	34	1.09	45	4.7	80	22	7.7	1.0	2.4	1	3	102	4.0
SLM	41	34	1.05	44	4.5	79	21	8.0	1.2	1.7	1	3	100	4.8
MILLINGTON			REX SMOOTHLEAF				95 PERCENT							
SLM LT SP	42	34	1.07	45	4.4	81	20	6.6	1.8	2.6	3	3	96	5.6
SLM	41	34	1.08	46	4.2	80	22	7.6	2.9	4.1	2	3	97	5.4
LM	51	34	1.05	45	4.0	80	20	6.9	2.5	3.8	2	2	96	6.9
SPRING CREEK			DIXIE KING II				90 PERCENT							
SLM	41	34	1.03	45	4.6	85	21	6.0	2.1	3.0	3	4	96	4.8
SLM	41	34	1.01	45	4.8	82	20	6.4	1.8	2.4	3	3	96	7.3
SLM	41	33	1.02	47	5.0	81	20	7.3	1.7	3.3	2	3	97	5.5
SOUTH WEST														
SOUTH TEXAS														
DANEVANG			DELTAPINE 16				70 PERCENT							
SLM	41	34	1.08	44	4.6	82	22	6.6	2.3	3.0	2	3	98	5.4
LM	51	34	1.08	45	4.6	83	21	6.1	2.9	3.7	4	3	87	6.7
LM	51	34	1.10	44	4.8	85	21	6.1	2.1	3.3	4	3	89	6.1
PROGRESSO			STONEVILLE 7A				95 PERCENT							
SLM	41	34	1.10	46	4.7	88	22	5.0	1.6	2.0	2	4	98	5.2
SLM	41	34	1.10	47	5.0	84	21	5.7	1.6	2.3	2	3	99	5.4
SLM	41	34	1.09	45	5.0	80	22	6.6	1.4	2.4	2	4	97	5.8

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
TENNESSEE																				
DYERSBURG				STONEVILLE 213						90 PERCENT										
SLM		41 34	103	34	6.7	4.7	120	90	16	14	62	68.2	11.2	93	82.2	3.5	97	27.2	25.6	102
SLM		41 34	96	31	6.2	4.6	130	90	11	9	63	69.6	10.7	94	82.5	3.5	97	28.7	23.8	92
SLM		41 33	95	30	6.8	4.6	100	90	13	10	58	70.5	10.5	96	81.0	3.3	95	27.6	26.2	104
GADSDEN				DELTAPINE 16						90 PERCENT										
M		31 34	110	38	7.1	5.2	120	90	17	11	61	70.0	10.8	96	82.1	3.1	98	28.2	26.6	104
M		31 34	102	32	6.5	4.9	120	90	11	9	58	71.8	10.3	97	81.5	3.6	95	27.5	24.2	96
SLM		41 34	96	30	6.5	4.9	100	80	14	12	57	71.0	9.9	94	82.5	3.3	98	27.8	25.6	101
MILLINGTON				REX SMOOTHLEAF						95 PERCENT										
SLM LT SP		42 34	98	35	6.3	4.3	120	90	20	16	74	67.9	10.9	91	82.1	3.7	96	28.6	25.7	100
SLM		41 34	95	29	6.4	4.4	110	90	15	14	59	68.1	10.3	90	82.2	3.1	99	29.2	26.8	103
LM		51 34	94	30	6.3	4.4	100	90	14	13	62	68.8	10.0	90	81.5	3.2	96	28.4	24.4	95
SPRING CREEK				DIXIE KING II						90 PERCENT										
SLM		41 34	94	31	6.2	4.5	110	90	24	13	53	67.9	11.3	93	81.8	3.6	95	27.4	25.9	103
SLM		41 34	81	25	5.3	4.3	120	100	6	9	47	66.8	11.0	89	82.1	3.4	97	28.5	26.3	102
SLM		41 33	76	19 1/	5.5	4.5	100	90	10	10	43	68.5	10.7	92	82.2	3.6	96	28.3	25.3	99
SOUTH WEST																				
SOUTH TEXAS																				
DANEVANG				DELTAPINE 16						70 PERCENT										
SLM		41 34	100	33	6.4	4.2	90	70	27	15	58	68.7	10.9	93	84.2	3.2	103	29.2	26.5	102
LM		51 34	93	30	5.4	3.6	110	80	23	16	55	64.9	9.8	83	82.8	3.4	98	28.9	27.0	104
LM		51 34	90	30	5.5	3.9	110	90	24	16	49	63.2	10.0	80	80.4	3.4	93	31.9	25.4	92
PROGRESSO				STONEVILLE 7A						95 PERCENT										
SLM		41 34	97	30	5.4	3.8	90	80	28	24	60	68.2	11.5	94	83.1	3.4	99	29.0	25.7	99
SLM		41 34	96	32	5.5	3.9	100	70	26	22	60	68.3	11.1	93	84.0	3.3	102	29.9	25.9	98
SLM		41 34	100	31	5.1	3.8	90	80	20	16	59	68.3	10.6	91	83.6	3.2	101	31.4	25.3	92

1/ End breakage too high to spin 50s yarn. 36s yarn spun and strength adjusted to equivalent of 50s.

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
SOUTH TEXAS														
SAN JUAN			TPSA 1633				73 PERCENT							
SLM	41	34	1.10	45	4.3	88	22	4.9	1.3	1.9	2	3	97	4.6
SLM	41	35	1.11	45	4.2	80	22	5.0	2.2	3.1	2	3	96	6.0
SLM LT SP	42	34	1.10	46	4.4	82	22	5.4	2.0	3.4	3	4	95	6.1
SEBASTIAN			STONEVILLE 213				98 PERCENT							
SLM LT SP	42	34	1.10	46	4.8	82	23	5.7	1.4	1.9	3	5	93	5.2
SLM	41	34	1.08	45	4.7	75	21	6.0	1.4	2.1	3	4	95	5.1
SLM LT SP	42	34	1.07	44	4.5	75	22	6.9	1.9	2.9	3	3	93	5.7
TAFT			TAMCOT SP37				75 PERCENT							
M	31	34	1.06	45	3.9	79	21	6.4	1.2	1.7	1	3	103	3.9
SLM	41	33	1.04	45	3.8	73	20	6.3	1.4	1.8	3	3	95	5.2
SLM LT SP	42	33	1.06	44	4.0	71	19	6.7	1.7	2.7	4	3	88	5.6
CENTRAL TEXAS														
BATESVILLE			STONEVILLE 213				95 PERCENT							
M	31	34	1.09	44	4.6	77	22	6.6	1.2	1.8	1	3	101	4.2
SLM LT SP	42	35	1.10	46	4.4	77	22	6.5	2.1	2.8	4	4	90	5.3
SLM	41	35	1.10	46	4.4	80	21	6.9	1.7	2.5	3	3	95	5.1
CROCKETT			STONEVILLE 7A				80 PERCENT							
SLM	41	34	1.05	47	4.6	85	23	5.8	1.3	1.8	2	3	98	3.6
SLM	41	34	1.06	47	4.4	93	21	5.8	1.6	2.4	2	3	98	6.0
SLM LT SP	42	34	1.04	46	4.9	87	20	5.9	1.7	3.2	5	3	83	8.3
NAVASOTA			TAMCOT SP37				85 PERCENT							
SLM	41	35	1.12	45	3.3	79	22	7.2	2.1	3.2	2	3	98	4.6
SLM	41	35	1.13	45	3.6	80	21	6.9	1.5	2.5	2	3	100	5.3
SLM SP	43	34	1.10	43	3.9	78	19	6.9	1.8	3.4	4	3	90	5.8
ROSENBERG			DELTAPINE 16				66 PERCENT							
SLM LT SP	42	34	1.07	46	4.9	84	22	5.6	1.9	2.5	4	4	89	5.5
SLM LT SP	42	34	1.08	45	4.9	85	22	6.8	2.2	3.3	4	4	88	5.5
SLM LT SP	42	33	1.09	45	5.1	78	22	6.7	2.0	3.7	4	3	89	5.2

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name Code	32d In.		Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																				
SOUTH TEXAS																				
SAN JUAN			TPSA 1633						73 PERCENT											
SLM	41	34	101	31	5.8	4.1	100	70	26	18	61	69.7	10.8	95	84.3	3.5	102	29.5	25.6	97
SLM	41	35	105	36	5.8	4.2	100	80	23	17	71	67.3	11.3	91	82.4	3.4	97	29.7	25.5	97
SLM LT SP	42	34	100	32	5.3	3.8	110	90	17	13	64	67.6	10.5	89	84.1	3.7	100	29.2	25.0	96
SEBASTIAN			STONEVILLE 213						98 PERCENT											
SLM LT SP	42	34	102	32	6.3	4.7	80	70	36	22	62	66.9	12.0	93	84.4	3.4	102	29.3	27.1	104
SLM	41	34	96	31	5.9	4.2	100	70	19	15	58	67.4	11.0	90	83.9	3.4	101	30.0	25.5	96
SLM LT SP	42	34	95	30	6.0	3.8	100	80	23	16	56	66.6	11.0	89	84.7	3.2	104	30.1	26.1	98
TAFT			TAMCOT SP37						75 PERCENT											
M	31	34	98	32	6.5	4.9	90	70	27	19	61	71.0	10.6	97	84.7	3.2	104	29.1	26.9	103
SLM	41	33	98	34	6.7	4.8	100	70	21	19	63	67.3	10.5	89	84.9	3.5	103	30.1	26.4	99
SLM LT SP	42	33	96	32	6.5	4.7	100	80	20	15	58	65.2	10.9	86	83.9	3.4	101	29.2	26.2	100
CENTRAL TEXAS																				
BATESVILLE			STONEVILLE 213						95 PERCENT											
M	31	34	103	35	6.3	4.6	100	80	20	17	59	70.1	11.3	97	84.3	3.4	102	30.9	25.5	94
SLM LT SP	42	35	104	36	6.0	4.8	100	80	25	20	60	65.1	11.3	87	84.0	3.6	100	29.3	27.2	104
SLM	41	35	103	35	6.6	4.7	100	70	31	21	61	69.8	10.7	95	82.5	3.5	97	29.8	25.1	95
CROCKETT			STONEVILLE 7A						80 PERCENT											
SLM	41	34	104	34	6.0	4.1	120	90	18	12	58	68.2	10.5	90	84.1	3.3	102	29.3	25.6	98
SLM	41	34	110	37	6.2	4.6	100	90	23	19	65	69.8	10.7	95	81.5	3.2	96	30.5	25.1	93
SLM LT SP	42	34	91	29	5.5	4.1	120	90	18	15	55	62.7	10.4	80	82.7	3.4	98	31.0	24.5	90
NAVASOTA			TAMCOT SP37						85 PERCENT											
SLM	41	35	116	43	7.0	5.2	100	80	19	14	72	69.6	10.7	94	84.6	3.5	102	28.8	25.8	100
SLM	41	35	115	44	7.7	5.3	90	70	30	21	79	69.8	10.5	94	82.0	3.4	97	28.2	25.0	98
SLM SP	43	34	92	27	6.3	3.9	90	70	21	20	66	65.6	10.4	85	81.9	3.9	94	29.9	23.7	89
ROSENBERG			DELTAPINE 16						66 PERCENT											
SLM LT SP	42	34	93	28	5.2	3.7	100	80	30	27	51	64.4	11.3	85	84.1	3.4	101	29.1	27.0	104
SLM LT SP	42	34	91	28	5.7	3.7	110	80	26	23	52	63.1	10.9	82	81.9	3.5	96	30.4	25.4	95
SLM LT SP	42	33	86	24	5.3	3.6	100	70	18	11	51	63.4	10.9	83	80.8	3.4	94	29.2	22.7	86

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973 --Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
CENTRAL TEXAS														
WHITNEY			TAMCOT SP37				100 PERCENT							
LM	51	33	1.04	43	3.1	84	21	6.6	3.5	4.6	2	3	99	8.4
1/ SGO	61	32	1.01	40	3.1	81	22	6.6	4.1	5.9	5	3	82	9.3
1/ SGO	61	32	1.02	43	3.6	82	20	6.3	3.6	5.3	4	3	85	9.0
NORTHWEST TEXAS														
BROWNFIELD			DELTAPINE SR-1				70 PERCENT							
M	31	30	0.99	47	4.5	84	21	7.0	1.9	3.1	1	3	102	5.5
M	31	31	0.99	46	4.5	82	21	6.6	0.8	2.0	1	3	103	4.8
SLM	41	33	1.04	47	3.9	92	24	6.1	1.2	2.3	1	3	102	5.9
LUBBOCK			COKER 5110				100 PERCENT							
SLM	41	34	1.07	44	4.2	81	22	6.6	2.6	3.6	1	4	101	6.3
SLM	41	34	1.07	44	4.3	82	23	6.9	1.9	3.1	1	3	101	6.1 2/
SLM	41	34	1.07	44	4.2	83	23	7.1	2.8	4.5	1	3	101	5.2
O'DONNELL			LOCKETT 4789				70 PERCENT							
M LT SP	32	32	1.01	46	4.4	84	21	6.6	0.9	2.1	2	4	100	5.4
M LT SP	32	31	1.05	44	4.0	83	21	7.2	2.2	3.7	2	3	99	4.9 2/
M LT SP	32	31	1.03	42	3.6	78	22	7.0	1.8	3.3	3	3	94	6.4
RAYLAND			LOCKETT 4789A				100 PERCENT							
M LT SP	32	32	1.02	47	4.6	88	23	6.0	1.7	2.5	2	3	97	6.5
SLM	41	33	1.08	45	4.6	85	24	6.4	3.2	4.7	2	3	100	6.6 2/
SLM LT SP	42	33	1.06	48	4.6	85	24	6.4	2.4	3.8	3	3	95	8.1
ROPESVILLE			LOCKETT 4789A				100 PERCENT							
M	31	32	1.01	47	4.0	85	23	6.7	0.9	2.0	0	3	105	4.5
M	31	32	1.02	46	3.7	84	22	7.1	1.3	2.5	1	3	103	4.0
M	31	32	1.07	45	3.4	86	23	6.9	2.1	3.9	1	3	103	4.7
VERNON			LOCKETT BXL				100 PERCENT							
SLM LT SP	42	32	1.04	45	4.4	86	22	6.6	2.3	3.4	3	4	95	6.1
SLM LT SP	42	33	1.08	43	4.3	82	22	7.0	3.3	4.7	3	4	96	5.9
SLM	41	33	1.05	46	4.3	85	23	6.5	1.9	2.9	2	3	99	6.6

1/ Reduced from 51 because of bark
2/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																				
CENTRAL TEXAS																				
WHITNEY			FAMCOT SP37						100 PERCENT											
LM		51 33	104	34	6.5	4.7	90	60	37	22	54	70.1	11.0	96	83.9	3.5	101	29.9	25.0	94
1/SGO		61 32	87	26	6.1	4.3	80	60	57	46	43	61.3	10.0	77	83.0	3.9	97	30.9	23.6	87
1/SGO		61 32	80	22	5.2	3.7	90	60	29	20	40	62.8	9.6	79	82.4	3.9	95	31.0	24.3	89
NORTHWEST TEXAS																				
BROWNFIELD			DELTAPINE SR-1						70 PERCENT											
M		31 30	83	22	5.6	4.4	110	80	24	15	44	70.9	11.0	98	81.9	3.4	96	28.5	25.0	97
M		31 31	81	22	5.8	5.0	120	90	16	14	35	71.7	10.5	98	82.8	3.5	98	29.9	25.0	94
SLM		41 33	111	35	6.3	4.6	80	70	20	20	63	69.3	10.7	94	81.5	4.0	93	30.3	25.0	93
LUBBOCK			COKER 5110						100 PERCENT											
SLM		41 34	101	29	6.5	4.5	90	70	23	17	58	70.4	11.2	97	82.7	4.2	95	29.1	25.5	98
SLM		41 34	102	33	6.7	4.7	90	70	27	20	59	70.1	10.3	94	82.5	3.8	96	29.3	25.7	98
SLM		41 34	91	27	5.8	4.5	80	70	18	16	45	69.0	10.5	92	80.8	3.9	92	29.5	24.7	94
O'DONNELL			LOCKETT 4789						70 PERCENT											
M LT SP		32 32	94	26	6.3	4.2	90	70	36	24	49	68.1	11.1	93	81.9	3.8	95	28.6	26.5	103
M LT SP		32 31	99	30	6.5	4.7	80	60	25	20	51	69.4	10.8	94	81.8	3.9	94	28.6	25.1	97
M LT SP		32 31	91	25	6.2	4.2	70	60	23	21	49	67.2	10.9	90	82.6	4.1	95	27.1	26.6	106
RAYLAND			LOCKETT 4789A						100 PERCENT											
M LT SP		32 32	97	29	5.8	4.6	100	70	14	12	48	69.0	10.8	93	82.2	3.3	97	29.0	25.1	96
SLM		41 33	109	36	6.7	4.9	90	80	13	12	58	68.3	10.8	92	81.7	3.7	95	27.8	26.0	102
SLM LT SP		42 33	100	30	6.2	3.9	80	80	18	11	55	68.1	11.0	92	81.8	4.2	93	28.9	25.6	99
ROPESVILLE			LOCKETT 4789A						100 PERCENT											
M		31 32	107	34	7.0	5.1	110	90	17	11	61	71.7	11.1	99	83.1	3.8	98	29.4	25.6	98
M		31 32	106	32	6.8	4.8	90	70	22	15	58	70.6	10.4	95	82.5	3.6	97	29.5	25.0	95
M		31 32	106	32	6.7	4.6	100	80	14	11	56	69.5	10.3	93	81.3	3.8	93	28.6	25.6	99
VERNON			LOCKETT BXL						100 PERCENT											
SLM LT SP		42 32	97	27	6.4	4.2	90	80	18	17	49	68.4	11.0	93	81.3	3.4	95	28.4	25.9	101
SLM LT SP		42 33	102	31	6.6	4.6	100	70	12	9	52	67.0	10.8	89	82.5	3.6	97	29.0	25.7	99
SLM		41 33	101	32	6.3	4.3	100	90	10	9	58	68.8	10.5	92	81.5	3.9	93	29.2	25.9	99

1/ Reduced from 51 because of bark

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
NORTHWEST TEXAS														
WELCH			PAYMASTER 111A				75 PERCENT							
M	31	32	0.97	46	4.3	78	21	6.9	1.5	2.4	1	3	102	5.5
SLM	41	32	1.03	45	4.0	83	21	6.9	2.0	3.6	1	3	101	6.1 1/
M LT SP	32	33	0.95	44	3.9	77	19	6.6	1.9	3.7	2	4	101	7.2
OKLAHOMA														
WEBBERS FALLS			DELTAPINE 16				95 PERCENT							
SLM	41	36	1.17	46	4.8	80	24	7.6	1.6	2.8	2	3	99	5.3 1/
SLM	41	36	1.18	47	4.6	80	22	8.3	2.6	3.7	2	2	98	4.9
SLM	41	36	1.16	44	3.8	80	22	8.5	2.7	4.2	2	2	99	5.7
WEST														
ARIZONA														
BOWIE			STONEVILLE 213				97 PERCENT							
M	31	35	1.07	45	4.8	81	22	6.8	1.1	1.2	1	4	105	7.0
M	31	34	1.03	44	4.1	82	20	6.7	1.6	2.7	0	3	105	5.8 1/
M	31	35	1.10	45	3.9	78	22	7.3	1.2	2.6	0	3	105	4.6 1/
BUCKEYE			STONEVILLE 213				100 PERCENT							
M LT SP	32	35	1.08	45	5.3	94	22	6.2	1.4	2.5	1	4	102	5.5 1/
M	31	35	1.09	45	4.8	91	24	5.8	1.0	1.4	0	3	105	5.3 1/
M	31	35	1.08	44	4.7	95	23	5.8	2.2	3.2	0	3	105	6.8
CHANDLER			DELTAPINE 16				100 PERCENT							
M	31	35	1.10	44	4.7	89	25	6.6	2.0	2.4	0	3	105	4.8
M	31	35	1.14	45	4.7	85	24	7.4	1.2	2.5	0	3	105	4.5
M	31	35	1.12	45	4.8	87	23	7.1	1.2	1.7	0	3	106	4.7
PARKER			DELTAPINE 16				100 PERCENT							
M	31	35	1.14	45	4.5	86	24	7.2	1.1	2.0	1	3	104	4.8
M	31	35	1.10	45	4.8	88	23	7.1	0.9	2.0	1	3	104	4.5
M	31	35	1.10	44	4.0	84	23	7.1	1.7	2.9	0	2	106	4.5 1/

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																				
NORTHWEST TEXAS																				
WELCH			PAYMASTER 111A						75 PERCENT											
M		31 32	79	24	5.8	4.8	100	90	20	13	38	72.3	10.3	98	83.0	3.5	98	29.2	24.1	92
SLM		41 32	98	28	6.4	4.8	90	70	13	14	51	70.9	10.4	96	81.1	4.1	92	29.0	25.7	99
M LT SP		32 33	72	20	5.5	4.9	100	80	17	14	36	69.6	11.3	94	82.0	5.1	90	28.7	25.1	97
OKLAHOMA																				
WEBBERS FALLS			DELTAPINE 16						95 PERCENT											
SLM		41 36	110	38	7.2	5.0	100	90	13	11	73	68.2	10.1	89	83.2	3.2	100	27.7	25.9	102
SLM		41 36	108	35	6.9	5.2	100	90	14	13	78	66.2	10.0	85	83.1	3.6	98	27.7	26.4	104
SLM		41 36	107	35	7.7	5.4	100	70	14	12	66	69.3	9.9	91	83.5	3.7	99	28.0	25.9	102
WEST																				
ARIZONA																				
BOWIE			STONEVILLE 213						97 PERCENT											
M		31 35	100	30	6.5	4.5	120	90	8	6	57	72.3	11.6	102	82.4	3.6	97	29.0	24.4	94
M		31 34	88	24	6.1	4.7	100	80	23	20	40	72.2	11.4	101	83.0	3.3	99	28.4	25.8	100
M		31 35	105	32	6.6	4.7	110	80	9	8	55	72.4	10.4	98	82.7	3.3	99	26.7	27.0	109
BUCKEYE			STONEVILLE 213						100 PERCENT											
M LT SP		32 35	94	28	5.4	4.5	100	90	20	13	46	71.8	11.3	100	82.2	3.1	98	27.7	26.4	104
M		31 35	102	29	5.7	4.1	120	90	5	6	50	72.7	10.6	99	82.5	3.1	99	29.0	26.8	103
M		31 35	93	27	5.7	3.9	110	80	8	6	44	73.5	10.3	100	82.6	3.4	98	28.8	25.9	100
CHANDLER			DELTAPINE 16						100 PERCENT											
M		31 35	108	37	6.6	4.7	110	90	21	15	63	73.3	10.8	101	82.9	3.2	99	27.8	26.5	104
M		31 35	109	36	6.4	5.1	110	70	21	12	63	73.2	10.1	99	83.4	2.8	102	27.9	26.4	104
M		31 35	103	32	6.4	4.6	100	80	15	10	56	73.1	10.1	99	82.7	3.1	99	27.8	26.0	102
PARKER			DELTAPINE 16						100 PERCENT											
M		31 35	113	40	6.2	4.7	110	70	21	13	69	73.9	10.8	102	83.5	3.2	101	29.0	26.4	102
M		31 35	102	30	6.1	4.2	100	90	17	12	56	73.8	10.2	100	83.5	2.8	102	27.1	26.6	106
M		31 35	103	32	6.8	4.6	100	80	11	9	55	72.6	10.0	98	83.0	3.2	100	27.9	26.4	104

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST														
ARIZONA														
SELMA			DELTAPINE 16				100 PERCENT							
M LT SP	32	35	1.15	44	4.7	80	23	7.9	2.1	2.7	1	3	104	4.9
M	31	35	1.10	42	3.5	83	21	7.4	2.9	4.2	0	2	106	4.5 1/
STANFIELD			DELTAPINE 16				100 PERCENT							
SM	21	34	1.06	43	4.8	86	23	6.9	0.8	1.8	0	3	105	6.8
M	31	34	1.09	44	4.8	85	22	7.6	1.2	2.0	1	3	104	5.4
M	31	34	1.08	43	4.5	84	23	7.1	1.7	3.5	0	3	106	5.7
CALIFORNIA														
BAKERSFIELD			ACALA SJ-1				100 PERCENT							
M	31	36	1.12	48	4.7	102	27	5.8	1.5	2.1	1	3	102	4.2
M	31	35	1.11	48	4.9	96	29	5.7	1.1	2.3	1	3	102	6.2
SLM	41	36	1.11	45	4.3	91	25	6.4	1.5	2.3	1	3	102	5.3
BAKERSFIELD			ACALA SJ-2				100 PERCENT							
M	31	35	1.13	45	4.6	97	26	6.0	1.0	1.6	1	3	104	4.3
M	31	35	1.11	48	4.7	94	26	5.5	1.2	1.8	1	4	103	6.2
SLM	41	35	1.09	44	3.5	89	26	6.1	1.4	2.7	1	3	102	5.2 1/
BRAWLEY			DELTAPINE 16				100 PERCENT							
M	31	34	1.07	44	4.9	88	25	6.5	1.0	2.0	1	3	104	6.1
M	31	35	1.12	45	4.9	90	25	6.3	1.2	2.1	0	2	104	6.6 1/
M	31	35	1.12	43	4.4	89	23	7.0	1.1	2.0	1	2	103	4.8
BUTTONWILLOW			ACALA SJ-1				100 PERCENT							
M	31	35	1.11	44	4.4	95	28	6.0	1.6	2.0	1	3	103	5.1
M	31	35	1.09	46	4.6	96	28	5.2	1.0	1.8	1	3	103	7.3
M	31	36	1.10	45	4.5	93	26	5.4	0.9	1.8	0	3	105	4.5
CHOWCHILLA			ACALA SJ-1				99 PERCENT							
SLM	41	36	1.10	46	4.1	99	26	4.8	1.6	2.3	2	3	97	7.2
SLM	41	36	1.11	48	4.5	98	27	5.5	1.1	2.0	1	3	101	5.5
SLM	41	36	1.13	46	3.6	89	26	5.5	1.4	3.1	2	2	98	5.0

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																				
ARIZONA																				
SELMA				DELTAPINE 16					100 PERCENT											
M LT SP	32	35	113	42	7.0	5.2	120	90	13	11	73	73.1	10.8	101	83.0	2.9	101	28.0	26.8	105
M	31	35	109	35	6.9	5.1	100	70	11	9	60	73.6	9.9	99	83.6	3.2	101	27.7	26.5	105
STANFIELD				DELTAPINE 16					100 PERCENT											
SM	21	34	98	29	6.5	4.5	110	70	22	16	53	74.1	10.6	102	82.7	2.9	100	28.1	26.6	104
M	31	34	90	26	5.8	4.3	110	90	19	17	46	74.1	10.6	102	83.0	3.0	100	27.3	26.9	107
M	31	34	97	30	6.4	5.0	90	80	16	13	46	73.8	10.1	100	83.5	3.0	102	28.7	27.1	105
CALIFORNIA																				
BAKERSFIELD				ACALA SJ-1					100 PERCENT											
M	31	36	130	48	6.1	4.6	120	80	22	17	73	69.5	10.9	95	80.7	3.4	93	27.7	26.3	104
M	31	35	124	43	6.2	4.5	120	90	9	8	74	71.0	11.2	98	83.2	3.3	100	27.9	25.8	101
SLM	41	36	116	40	6.0	4.4	90	70	16	15	62	70.6	10.9	97	81.4	3.4	95	29.4	26.1	100
BAKERSFIELD				ACALA SJ-2					100 PERCENT											
M	31	35	131	50	6.5	5.0	110	80	20	16	70	72.1	11.3	101	81.6	3.3	96	27.8	26.3	104
M	31	35	126	45	6.2	4.7	120	100	8	7	79	71.3	11.5	100	82.1	3.8	95	28.2	23.7	92
SLM	41	35	118	40	6.0	4.5	80	70	23	12	71	69.0	10.9	93	81.6	4.0	93	28.9	26.0	100
BRAWLEY				DELTAPINE 16					100 PERCENT											
M	31	34	95	26	5.8	3.9	100	70	23	20	48	72.3	10.1	97	82.3	2.9	99	29.4	27.0	103
M	31	35	101	30	5.8	4.0	100	80	19	15	55	73.1	9.7	98	82.5	2.9	100	29.1	26.4	101
M	31	35	108	36	6.5	4.6	100	70	13	11	60	71.2	9.6	94	82.6	2.9	100	28.1	26.7	105
BUTTONWILLOW				ACALA SJ-1					100 PERCENT											
M	31	35	120	42	5.8	4.4	100	70	36	25	63	72.0	11.5	101	81.6	3.4	96	27.8	25.9	102
M	31	35	120	41	5.9	4.4	120	90	15	10	69	71.5	11.3	100	83.1	3.2	100	28.0	26.1	102
M	31	36	120	40	5.8	4.5	110	80	11	10	65	71.4	10.9	98	81.4	3.1	96	28.5	26.2	102
CHOWCHILLA				ACALA SJ-1					99 PERCENT											
SLM	41	36	131	46	5.7	4.5	110	90	16	10	79	68.7	11.1	94	82.0	3.8	95	29.0	23.5	90
SLM	41	36	126	42	5.8	4.5	100	90	13	9	74	69.8	11.0	96	82.6	3.3	98	29.3	25.4	97
SLM	41	36	130	45	6.3	4.7	100	70	16	12	76	67.7	10.1	88	82.8	3.5	98	29.7	24.9	96

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973 --Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Grayness	Yellowness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST														
CALIFORNIA														
COALINGA			ACALA SJ-1				100 PERCENT							
M	31	35	1.13	47	4.6	95	26	5.2	0.6	1.4	1	3	103	3.8
M	31	35	1.13	48	4.6	94	26	5.6	0.7	1.5	1	3	103	4.7
SLM	41	36	1.11	45	3.1	92	25	5.4	1.9	3.2	2	3	96	4.2
DOS PALOS			ACALA SJ-1				100 PERCENT							
M	31	35	1.11	47	4.5	96	26	4.9	1.3	2.3	1	3	101	4.5
SLM	41	36	1.13	47	4.2	96	26	6.0	1.2	1.8	2	2	99	4.7
SLM	41	36	1.13	48	3.8	98	25	5.6	1.3	2.2	1	2	101	3.7 1/
HANFORD			ACALA SJ-1				100 PERCENT							
M	31	35	1.13	46	4.5	97	26	5.1	1.3	1.9	1	3	101	4.8
SLM	41	35	1.11	45	4.3	98	25	5.4	0.9	1.8	2	3	96	5.3 1/
SLM	41	36	1.13	46	3.6	92	25	6.1	1.4	2.8	3	3	95	5.2
KERMAN			ACALA SJ-1				96 PERCENT							
M	31	35	1.12	48	4.6	96	27	5.2	1.2	2.1	1	3	101	4.4
SLM	41	36	1.11	48	4.3	97	27	5.5	1.5	2.3	1	3	100	4.8
SLM	41	36	1.13	46	3.4	92	23	6.6	1.6	2.7	2	2	98	4.5
MENDOTA			ACALA SJ-1				100 PERCENT							
SLM	41	36	1.15	47	4.3	95	27	5.5	2.0	3.2	1	3	101	5.0
SLM+	40	36	1.14	46	4.4	98	27	5.5	1.3	1.6	1	3	103	5.9
SLM	41	36	1.14	48	3.8	96	26	6.0	1.7	3.3	1	2	101	4.7
PIXLEY			ACALA SJ-1				100 PERCENT							
M	31	35	1.08	45	4.5	98	25	5.2	1.0	2.1	2	3	101	4.9
SLM	41	35	1.08	46	4.3	100	26	5.3	1.2	2.5	2	3	96	5.2
SLM	41	35	1.09	44	3.6	92	26	5.5	1.9	3.4	2	3	100	6.2
SHAFTER			ACALA SJ-1				100 PERCENT							
M	31	35	1.09	47	4.4	99	29	5.6	1.7	2.3	1	3	103	4.9
SLM	41	35	1.12	46	4.1	92	27	5.5	2.0	2.6	2	3	100	6.9
M	31	36	1.14	48	4.5	99	27	5.7	1.3	2.1	1	3	104	4.9 1/

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																				
CALIFORNIA																				
COALINGA			ACALA SJ-1						100 PERCENT											
M		31 35	126	45	6.0	4.7	100	80	12	8	74	71.0	11.2	98	82.8	3.6	98	28.5	23.8	92
M		31 35	116	40	5.9	4.4	110	90	8	8	75	70.2	10.9	96	82.3	3.6	96	28.2	26.0	102
SLM		41 36	119	43	6.1	4.6	80	60	16	14	77	65.9	11.0	87	82.8	4.0	96	27.9	24.8	97
DOS PALOS			ACALA SJ-1						100 PERCENT											
M		31 35	125	44	5.8	4.3	100	80	17	11	77	70.3	11.0	97	81.3	3.5	94	28.4	23.1	90
SLM		41 36	129	45	6.0	4.3	110	80	10	7	84	70.4	10.7	96	82.5	3.2	99	28.4	25.0	97
SLM		41 36	131	47	6.6	4.9	110	80	9	9	84	70.6	10.6	96	82.8	3.6	98	28.2	26.0	102
HANFORD			ACALA SJ-1						100 PERCENT											
M		31 35	127	43	5.8	4.6	100	80	15	12	74	70.7	11.3	98	80.9	4.1	91	27.6	23.8	94
SLM		41 35	120	40	5.6	4.3	90	70	13	9	73	67.7	10.7	90	80.9	3.4	94	29.1	25.9	99
SLM		41 36	119	41	6.1	4.4	80	60	26	18	71	66.9	10.3	87	82.1	3.9	95	28.9	25.0	96
KERMAN			ACALA SJ-1						96 PERCENT											
M		31 35	128	45	5.8	4.5	100	90	14	12	76	70.9	11.3	99	81.5	3.7	94	28.7	22.7	87
SLM		41 36	125	44	6.2	4.6	100	80	10	8	79	68.6	10.3	91	82.6	3.5	98	28.9	26.2	101
SLM		41 36	127	43	6.2	5.0	90	80	20	15	86	67.5	9.9	87	82.2	3.7	96	27.5	25.3	100
MENDOTA			ACALA SJ-1						100 PERCENT											
SLM		41 36	127	48	6.4	4.7	100	80	14	11	81	71.4	11.2	99	81.2	4.3	91	27.1	22.9	91
SLM+		40 36	131	45	6.3	4.8	100	80	14	12	80	70.4	10.7	96	83.3	3.2	100	28.5	26.2	102
SLM		41 36	131	46	6.4	4.8	90	70	17	13	89	70.0	10.8	96	81.6	3.2	96	27.6	25.9	102
PIXLEY			ACALA SJ-1						100 PERCENT											
M		31 35	118	39	5.6	4.2	90	70	25	19	59	69.8	11.4	97	82.0	3.6	96	28.4	22.9	89
SLM		41 35	116	38	5.4	4.1	90	70	28	21	64	69.0	10.5	92	82.3	3.1	98	28.8	25.1	97
SLM		41 35	120	39	5.9	4.4	70	60	29	23	65	69.0	10.4	92	83.6	3.7	99	30.3	24.5	91
SHAFTER			ACALA SJ-1						100 PERCENT											
M		31 35	130	49	5.8	4.4	100	80	25	17	76	71.7	11.4	100	82.4	3.6	97	29.9	26.2	99
SLM		41 35	130	45	6.2	4.6	110	80	16	11	74	69.9	10.8	95	82.1	3.4	97	29.6	26.5	101
M		31 36	131	45	6.2	4.7	90	80	17	13	79	70.9	10.4	96	82.5	3.3	98	28.3	25.5	99

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST														
CALIFORNIA														
STRATFORD			ACALA SJ-1				100 PERCENT							
M	31	35	1.12	44	4.2	97	26	6.1	1.0	2.2	1	3	103	4.5
M	31	35	1.12	46	4.4	97	26	6.4	1.4	2.0	1	3	103	4.7
SLM	41	35	1.14	48	3.8	89	25	6.1	3.3	4.3	1	3	102	5.4
TULARE			ACALA SJ-1				100 PERCENT							
SLM	41	36	1.11	46	4.3	103	26	6.0	1.5	1.9	2	3	100	4.8
SLM	41	35	1.13	45	4.1	98	26	5.7	1.6	2.6	2	3	98	6.7
SLM	41	36	1.09	43	3.8	95	26	5.3	1.5	2.5	2	2	99	4.9[1/]
WASCO			ACALA SJ-1				100 PERCENT							
M	31	35	1.11	46	4.4	92	27	5.9	1.3	2.3	1	3	104	6.9
SLM	41	35	1.07	45	4.4	98	26	5.4	1.6	2.7	3	4	96	4.8
M	31	35	1.09	43	4.4	95	25	5.8	1.2	2.5	1	3	103	4.6[1/]
WEST TEXAS														
PECOS			DELTAPINE 16				100 PERCENT*							
M	31	34	1.08	44	4.3	76	22	8.4	1.4	1.9	0	3	105	5.8
M	31	34	1.09	42	3.1	80	23	8.8	1.5	3.0	0	2	109	4.6[1/]
M	31	34	1.07	39	2.7	81	22	8.4	1.7	2.5	0	2	106	5.3[1/]
PECOS			STONEVILLE 213				100 PERCENT*							
M LT SP	32	34	1.04	47	5.3	81	21	6.7	1.3	2.0	1	4	103	4.9
M	31	34	1.08	44	3.9	79	21	7.2	1.3	2.7	0	3	105	5.2[1/]
M	31	34	1.05	42	3.3	81	20	7.3	1.3	2.4	0	3	105	4.9[1/]

1/ Cotton stuck to processing rolls
* 100 percent selected for tests, less than 100 percent in the area

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of --Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																				
CALIFORNIA																				
STRATFORD				ACALA SJ-1						100 PERCENT										
M		31 35	125	43	6.2	4.7	90	70	23	20	70	72.3	11.5	102	82.1	3.6	96	28.6	23.4	90
M		31 35	118	40	5.8	4.3	100	80	21	14	72	73.4	11.1	102	82.7	3.4	98	28.2	25.7	100
SLM		41 35	128	43	6.4	4.8	100	70	13	12	79	69.4	10.7	94	82.8	3.3	99	27.5	25.8	102
TULARE				ACALA SJ-1						100 PERCENT										
SLM		41 36	128	47	6.3	4.5	100	80	27	14	68	70.3	11.1	97	80.6	3.4	93	27.1	24.8	99
SLM		41 35	125	44	6.2	4.7	110	80	12	11	78	69.7	11.2	96	82.6	3.6	97	28.7	22.2	85
SLM		41 36	124	40	5.9	4.4	100	70	11	7	70	69.1	10.2	91	81.4	3.7	94	29.3	25.0	95
WASCO				ACALA SJ-1						100 PERCENT										
M		31 35	124	42	6.0	4.7	100	80	23	18	75	70.6	11.0	97	81.7	3.4	96	29.2	27.1	104
SLM		41 35	112	36	5.5	3.9	90	70	23	18	63	67.2	11.3	91	81.9	3.3	97	27.1	25.6	102
M		31 35	108	35	5.6	4.1	100	70	13	11	53	70.9	10.9	97	83.6	3.4	100	28.9	25.4	98
WEST TEXAS																				
PECOS				DELTAPINE 16						100 PERCENT										
M		31 34	103	33	7.7	5.4	130	90	8	10	66	72.4	10.8	99	83.7	3.1	102	29.8	26.7	101
M		31 34	110	34	7.3	5.4	70	70	20	18	68	75.0	10.6	103	84.2	3.1	103	27.5	26.7	106
M		31 34	106	33	7.3	5.4	80	60	18	19	58	71.7	10.5	98	85.0	3.3	104	27.1	26.3	105
PECOS				STONEVILLE 213						100 PERCENT										
M LT SP		32 34	95	30	6.3	4.9	120	90	36	23	52	70.7	11.8	100	82.3	4.0	95	27.3	23.7	94
M		31 34	105	33	7.3	5.3	80	70	13	9	60	73.1	10.9	101	84.1	3.3	102	27.4	25.8	102
M		31 34	99	31	7.2	4.9	90	70	16	12	49	71.3	10.9	98	84.1	3.7	100	28.2	25.9	101

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
ALABAMA														
BELLEVILLE			COKER 310				80 PERCENT							
LM	51	34	1.10	45	4.6	80	22	7.2	3.0	3.8	3	3	96	9.0
LM	51	34	1.10	45	4.6	76	21	8.2	3.9	5.0	3	3	95	9.3
LM	51	34	1.09	46	4.3	76	21	8.2	2.7	3.7	2	2	99	10.6
LM	51	34	1.09	44	4.0	75	23	7.7	4.0	5.0	4	2	88	9.6
GERALDINE			COKER 310				100 PERCENT							
SLM	41	34	1.12	42	4.1	87	23	6.8	1.6	1.7	2	3	97	7.0
LM	51	34	1.13	45	4.6	86	23	7.2	3.7	5.0	3	3	92	8.4
SLM	41	33	1.11	43	4.7	83	22	6.8	1.5	2.4	2	3	98	7.4
GEORGIA														
COMER			COKER 310				100 PERCENT							
SLM	41	35	1.13	47	5.1	84	23	6.6	1.9	2.5	3	4	92	7.3
SLM LT SP	42	34	1.11	45	5.2	80	24	7.1	1.6	2.9	3	4	95	8.3
SLM LT SP	42	34	1.10	44	4.9	80	23	6.4	2.5	3.4	3	3	94	7.8
MADISON			COKER 310				100 PERCENT							
SLM LT SP	42	34	1.12	44	4.6	83	23	6.7	3.1	4.0	4	4	89	8.7
SLM LT SP	42	34	1.11	46	4.8	82	23	6.8	3.0	4.4	4	4	90	9.2
SLM LT SP	42	34	1.13	44	4.5	82	23	6.6	2.9	4.0	3	3	95	9.4
NORTH CAROLINA														
MORVEN			COKER 310				90 PERCENT							
LM	51	35	1.13	46	4.4	87	24	6.6	4.4	5.5	3	3	91	8.8
SLM	41	35	1.12	46	4.9	84	23	6.4	1.9	2.6	2	3	99	7.8
SOUTH CAROLINA														
HARTSVILLE			COKER 310				100 PERCENT							
LM	51	35	1.17	44	4.5	81	23	6.6	3.3	4.4	3	3	93	8.5
1/ LM	51	35	1.15	45	4.6	82	24	6.8	3.9	5.3	3	2	94	9.8
LM	51	35	1.16	44	4.2	78	23	6.6	3.4	5.2	3	3	95	9.2
MISSISSIPPI														
MORGAN CITY			COKER 310				100 PERCENT							
SLM	41	37	1.17	46	4.7	89	25	6.3	3.2	4.8	2	3	98	8.9
LM	51	36	1.19	42	3.8	86	24	6.4	3.6	5.0	2	2	96	9.6
LM	51	36	1.19	44	4.1	86	24	6.5	3.8	5.1	2	2	95	10.0
LM	51	36	1.16	44	4.0	82	25	6.3	6.4	7.2	4	2	87	9.3

1/ Reduced from 41 because of grass

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST																				
ALABAMA																				
BELLEVILLE				COKER 310						80 PERCENT										
LM		51 34	101	31	6.6	4.7	120	100	19	13	66	69.2	10.9	94	83.3	3.3	100	27.9	26.2	103
LM		51 34	97	31	6.6	5.1	130	100	13	11	65	71.0	10.5	96	83.5	3.4	100	28.1	22.9	89
LM		51 34	98	31	6.6	5.2	110	90	10	9	58	70.1	10.0	93	83.3	3.0	101	29.4	25.2	96
LM		51 34	97	32	6.6	4.6	110	90	16	11	62	67.4	10.3	88	84.3	3.5	102	29.4	26.2	100
GERALDINE				COKER 310						100 PERCENT										
SLM		41 34	107	35	6.3	4.6	110	80	20	16	62	68.6	11.2	94	82.1	3.5	96	28.2	23.4	91
LM		51 34	102	35	6.2	5.0	110	90	15	11	62	66.9	11.2	90	83.7	3.0	102	27.8	26.2	103
SLM		41 33	99	27	6.1	4.0	120	90	8	6	55	68.0	10.6	90	83.1	3.1	100	28.9	25.3	97
GEORGIA																				
COMER				COKER 310						100 PERCENT										
SLM		41 35	109	36	6.3	4.5	130	100	13	7	74	66.2	11.8	91	83.1	3.7	98	28.4	25.5	99
SLM LT SP		42 34	106	32	5.9	4.5	120	100	15	9	63	65.6	11.4	88	82.7	3.5	98	28.7	25.5	99
SLM LT SP		42 34	96	26	6.1	4.1	120	90	7	6	51	67.0	11.3	91	82.2	4.1	94	28.5	25.9	101
MADISON				COKER 310						100 PERCENT										
SLM LT SP		42 34	108	34	6.7	4.7	130	90	16	15	67	65.4	11.7	88	81.7	4.0	93	28.8	25.7	99
SLM LT SP		42 34	101	30	5.8	4.6	110	90	15	12	61	65.8	11.5	89	82.0	3.9	95	28.9	24.9	96
SLM LT SP		42 34	97	28	6.1	4.5	110	70	15	10	54	67.2	10.8	89	82.5	3.5	97	29.9	25.0	94
NORTH CAROLINA																				
MORVEN				COKER 310						90 PERCENT										
LM		51 35	117	39	6.8	5.1	110	90	16	13	81	67.7	10.8	90	83.3	3.5	99	28.7	24.0	93
SLM		41 35	105	35	6.2	4.2	130	100	7	6	72	69.4	10.1	92	82.9	3.4	99	28.7	26.1	101
SOUTH CAROLINA																				
HARTSVILLE				COKER 310						100 PERCENT										
LM		51 35	106	36	6.2	4.7	120	90	14	13	80	66.8	10.7	88	82.7	3.4	98	29.3	25.2	96
1/ LM		51 35	104	35	6.1	4.7	110	90	28	23	70	67.5	10.3	88	82.2	3.3	97	28.7	26.3	102
LM		51 35	103	34	6.4	5.2	100	80	10	9	68	68.4	10.2	90	83.0	3.0	100	29.3	24.9	95
MISSISSIPPI																				
MORGAN CITY				COKER 310						100 PERCENT										
SLM		41 37	119	40	6.2	4.8	130	100	11	9	70	68.2	10.6	91	82.9	3.3	99	31.9	25.6	93
LM		51 36	118	41	6.6	4.8	110	90	23	17	76	69.5	10.5	93	83.3	3.2	100	28.3	23.4	91
LM		51 36	117	39	6.6	4.9	100	80	31	22	59	69.8	10.0	92	83.5	3.1	101	29.2	25.3	97
LM		51 36	110	35	5.9	4.6	100	80	22	15	68	64.7	9.6	82	83.4	3.7	99	30.3	24.7	92

1/ Reduced from 41 because of grass

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST TENNESSEE TRENTON			COKER 310				80 PERCENT							
SLM	41	34	1.10	44	4.5	87	23	6.8	2.3	2.7	2	3	99	7.1
SLM	41	34	1.10	44	4.4	82	24	6.6	1.8	2.6	2	3	97	8.2
SLM	41	34	1.08	44	4.3	83	23	7.1	1.8	2.7	2	2	100	8.7
NEW MEXICO ARTESIA			ACALA 1517-70				70 PERCENT							
M	31	36	1.14	45	3.8	92	26	6.5	1.1	1.5	0	3	104	6.7
M	31	36	1.18	46	3.9	86	27	6.6	1.0	2.3	0	3	104	6.5
M	31	36	1.16	43	3.4	97	27	5.2	1.3	3.1	0	3	105	7.8
DEXTER			ACALA 1517-V				100 PERCENT*							
M	31	37	1.14	45	4.0	94	28	7.3	1.0	1.7	1	4	102	6.6
M	31	36	1.17	45	3.8	92	27	6.4	1.6	2.4	1	3	103	6.7
M	31	37	1.22	43	3.0	88	27	6.0	1.3	2.5	1	3	104	7.6
LAS CRUCES			ACALA 1517-V				100 PERCENT*							
SLM	41	37	1.17	47	4.4	97	27	6.1	1.8	2.9	1	3	102	6.9
M	31	36	1.16	44	3.4	92	27	5.9	1.3	2.0	1	3	104	7.6
M	31	36	1.14	43	2.9	96	27	6.3	2.6	3.5	1	3	104	8.4
WEST TEXAS DELL CITY			ACALA 1517-C				80 PERCENT							
M	31	36	1.11	46	3.9	88	26	6.2	1.6	2.7	0	3	105	8.1
M	31	36	1.09	43	3.4	85	25	6.6	1.8	3.1	1	3	104	8.6
M	31	35	1.07	43	3.0	79	22	6.7	2.4	3.8	0	3	108	7.8
EL PASO			ACALA 1517-70				90 PERCENT							
SLM	41	37	1.14	45	4.3	95	28	6.0	1.8	2.2	1	3	102	7.0
SLM	41	36	1.17	46	3.7	90	27	6.3	1.9	2.8	1	2	103	8.1
SLM	41	36	1.12	44	2.8	90	28	6.4	3.0	4.2	1	2	102	9.2

* 100 percent selected for tests, less than 100 percent in the area

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1973--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST TENNESSEE																				
TRENTON			COKER 310						80 PERCENT											
SLM		41 34	104	34	5.9	4.3	120	90	30	14	62	68.4	11.4	94	84.2	3.6	101	29.1	26.3	101
SLM		41 34	96	30	5.8	4.6	120	100	10	10	61	69.3	10.7	94	82.1	3.9	95	27.6	23.8	94
SLM		41 34	95	27	6.2	4.1	120	90	11	6	54	70.5	10.1	94	82.1	3.5	96	28.5	25.8	100
NEW MEXICO																				
ARTESIA			ACALA 1517-70						70 PERCENT											
M		31 36	135	47	6.2	4.8	100	90	13	13	84	71.7	11.3	100	82.7	3.9	96	28.0	23.3	91
M		31 36	140	49	6.7	5.0	100	80	19	19	99	71.8	10.9	99	83.2	3.4	99	28.3	26.1	102
M		31 36	135	47	6.3	4.9	70	70	24	19	88	71.1	11.0	98	84.6	3.7	101	27.9	25.9	102
DEXTER			ACALA 1517-V						100 PERCENT*											
M		31 37	141	49	6.3	5.1	110	90	12	7	90	71.0	11.3	99	82.6	3.5	98	27.1	23.9	95
M		31 36	131	44	6.9	4.7	100	80	20	14	97	69.0	11.1	94	83.6	3.3	101	27.9	25.8	101
M		31 37	139	50	6.6	5.0	80	70	18	15	103	70.6	10.9	97	83.3	3.2	100	28.2	25.8	101
LAS CRUCES			ACALA 1517-V						100 PERCENT*											
SLM		41 37	140	51	6.5	5.2	110	90	10	9	89	69.9	11.3	97	82.9	3.6	98	28.4	23.3	90
M		31 36	130	46	6.3	4.8	100	70	23	19	90	71.4	11.4	100	82.9	3.3	99	27.2	25.3	101
M		31 36	130	45	6.8	5.0	70	60	20	18	83	69.8	11.0	96	83.4	3.0	101	28.4	25.7	100
WEST TEXAS																				
DELL CITY			ACALA 1517-C						80 PERCENT											
M		31 36	123	43	6.4	4.8	110	90	17	12	80	73.1	11.1	102	82.8	3.4	98	28.8	26.1	101
M		31 36	122	42	6.4	4.8	100	90	18	11	71	70.6	11.3	98	82.9	3.5	98	27.5	26.0	103
M		31 35	105	34	6.5	4.8	90	70	23	19	64	72.7	11.3	102	85.2	3.6	103	28.6	26.0	101
EL PASO			ACALA 1517-70						90 PERCENT											
SLM		41 37	139	50	6.4	4.9	110	90	19	15	97	70.6	11.3	98	82.3	3.6	96	28.4	23.5	91
SLM		41 36	139	47	7.1	5.0	100	70	18	12	96	72.1	10.5	98	84.0	3.3	102	27.0	25.4	102
SLM		41 36	138	50	6.9	5.3	70	60	28	17	96	70.3	10.6	95	83.8	3.7	100	27.8	25.9	102

* 100 percent selected for tests, less than 100 percent in the area

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1973

State, Production Area, Chronological Sampling and Classification			Comber waste	Yarn skein strength			Yarn elongation		Yarn appearance			Yarn imperfections	
Grade		Staple		22s or 27 tex	50s or 12 tex	Average Break Factor	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Average	22s or 27 tex	50s or 12 tex
Name	Code	32d in.	Pct.	Lbs.	Lbs.	No.	Pct.	Pct.	Index	Index	Index	No.	No.
SOUTH EAST													
ALABAMA													
BELLEVILLE			COKER 310				80 PERCENT						
LM	51	34	18.3	113	40	2243	7.1	5.3	130	100	115	12	8
LM	51	34	18.0	113	39	2218	7.3	5.7	130	110	120	5	3
LM	51	34	16.4	114	38	2204	7.1	5.3	120	100	110	5	3
LM	51	34	17.6	114	39	2229	7.2	5.3	130	100	115	6	4
GERALDINE			COKER 310				100 PERCENT						
SLM	41	34	17.9	125	45	2501	6.5	5.5	130	100	115	9	9
LM	51	34	15.6	118	40	2298	6.9	5.0	120	100	110	7	5
SLM	41	33	17.8	115	38	2215	6.7	4.6	120	110	115	5	4
GEORGIA													
COMER			COKER 310				100 PERCENT						
SLM	41	35	15.3	123	44	2453	6.7	4.8	130	110	120	4	4
SLM LT SP	42	34	15.6	121	40	2331	6.4	4.7	130	100	115	5	5
SLM LT SP	42	34	17.7	114	39	2229	6.4	4.7	120	100	110	5	3
MADISON			COKER 310				100 PERCENT						
SLM LT SP	42	34	18.1	124	44	2464	6.9	5.2	130	100	115	9	5
SLM LT SP	42	34	16.7	116	39	2251	6.5	4.9	130	100	115	10	8
SLM LT SP	42	34	18.1	116	39	2251	6.6	4.8	120	100	110	7	6
NORTH CAROLINA													
MORVEN			COKER 310				90 PERCENT						
LM	51	35	16.5	131	47	2616	6.8	5.4	120	110	115	8	6
SLM	41	35	15.8	124	44	2464	6.2	5.3	130	110	120	2	2
SOUTH CAROLINA													
HARTSVILLE			COKER 310				100 PERCENT						
LM	51	35	17.0	121	43	2406	6.5	4.8	130	100	115	9	6
LM	51	35	16.2	121	43	2406	6.8	5.1	120	100	110	13	9
LM	51	35	17.4	121	42	2381	6.8	5.7	100	90	95	9	4
MISSISSIPPI													
MORGAN CITY			COKER 310				100 PERCENT						
SLM	41	37	15.7	135	50	2735	6.5	5.2	130	110	120	5	5
LM	51	36	17.6	132	49	2677	7.0	5.4	130	100	115	11	8
LM	51	36	16.8	136	46	2646	6.8	4.9	120	90	105	14	10
LM	51	36	17.6	126	45	2511	6.4	5.2	120	90	105	10	7

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1973

State, Production Area, Chronological Sampling and Classification			Comber waste	Yarn skein strength			Yarn elongation		Yarn appearance			Yarn imperfections	
Grade		Staple		22s or 27 tex	50s or 12 tex	Average Break Factor	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Average	22s or 27 tex	50s or 12 tex
Name	Code	32d in.	Pct.	Lbs.	Lbs.	No.	Pct.	Pct.	Index	Index	Index	No.	No.
SOUTH EAST TENNESSEE													
TRENTON			COKER 310				80 PERCENT						
SLM	41	34	18.3	126	45	2511	6.7	5.3	130	110	120	10	7
SLM	41	34	17.8	114	39	2229	6.5	4.9	130	100	115	5	5
SLM	41	34	17.5	112	38	2182	6.7	4.7	120	100	110	6	5
NEW MEXICO													
ARTESIA			ACALA 1517-70				70 PERCENT						
M	31	36	16.3	153	56	3083	6.8	5.3	120	100	110	7	5
M	31	36	13.8	154	57	3119	7.3	5.5	110	90	100	12	10
M	31	36	16.2	155	56	3105	6.6	5.3	90	80	85	14	11
DEXTER			ACALA 1517-V				100 PERCENT						
M	31	37	13.6	157	57	3152	6.8	5.4	130	100	115	4	4
M	31	36	14.0	148	53	2953	6.9	5.4	110	80	95	12	8
M	31	37	14.6	152	57	3097	6.7	5.4	90	70	80	11	5
LAS CRUCES			ACALA 1517-V				100 PERCENT						
SLM	41	37	14.4	155	58	3155	6.8	5.2	120	100	110	7	5
M	31	36	16.3	151	55	3036	6.7	5.3	100	80	90	10	8
M	31	36	18.1	150	53	2975	6.9	5.1	80	70	75	13	9
WEST TEXAS													
DELL CITY			ACALA 1517-C				80 PERCENT						
M	31	36	15.6	140	52	2840	6.8	5.3	110	100	105	6	3
M	31	36	18.2	143	49	2798	6.9	5.1	120	90	105	8	6
M	31	35	19.3	122	43	2417	7.1	5.3	110	80	95	10	11
EL PASO			ACALA 1517-70				90 PERCENT						
SLM	41	37	14.3	156	59	3191	6.8	5.3	120	100	110	9	6
SLM	41	36	14.7	152	57	3097	6.9	5.4	100	90	95	14	9
SLM	41	36	16.2	156	55	3091	7.3	5.8	80	70	75	16	12

Table 8.--Cotton, American Pima extra long staple: Quality characteristics by production area, crop of 1973

State, Production Area, Chronological Sampling and Classification		Array length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Comber waste
Grade	Staple	Upper Quartile	Coeff. of Var'n		Zero gage	1/8" gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Com-posite		
	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	Pct.
WEST														
ARIZONA														
Peoria				Pima S-4			100 Percent							
3	44	1.49	30	4.0	106	34	8.0	1.6	4.0	3	5	95	7.1	17.6
4	44	1.49	30	3.9	109	36	6.8	2.8	3.7	3	4	92	8.5	20.3
Safford				Pima S-4			80 Percent							
4	44	1.53	29	3.9	100	36	7.2	2.7	4.3	4	5	87	9.3	17.2
3	44	1.51	30	3.7	103	33	7.4	2.0	3.0	4	5	92	8.3	21.3
3	44	1.45	30	3.4	105	34	7.1	2.2	3.5	3	5	92	7.6	19.0
Stanfield				Pima S-4			100 Percent							
4	44	1.50	30	4.1	104	35	7.4	2.7	4.1	4	5	87	7.8	17.1
4	44	1.49	32	3.8	103	36	7.0	3.1	4.5	4	5	91	9.3	19.6
3	44	1.46	31	3.6	102	37	6.8	1.6	2.4	3	5	96	7.6	15.7
NEW MEXICO														
Las Cruces				Pima S-4			80 Percent							
3	44	1.45	30	4.0	98	30	7.0	1.4	2.3	4	5	91	8.2	18.0
3	44	1.43	31	3.5	101	31	7.5	2.0	3.6	3	5	93	8.3	18.3
4	44	1.41	35	3.4	99	33	7.3	2.3	3.7	5	6	86	8.9	18.9
WEST TEXAS														
El Paso				Pima S-4			100 Percent							
4	44	1.47	31	4.1	100	34	7.8	1.7	3.3	5	5	85	7.2	17.8
3	44	1.41	34	3.7	102	33	7.3	1.4	3.2	4	5	86	7.8	18.8
4	44	1.45	33	3.1	103	33	6.8	3.3	5.3	4	5	88	10.9	20.3
El Paso				Pima S-4			100 Percent							
3	44	1.44	34	3.9	99	33	8.0	1.1	1.9	4	5	87	6.6	17.6
3	44	1.46	33	3.6	99	34	7.1	1.2	2.5	4	5	88	7.9	18.9
3	44	1.42	33	3.4	101	33	6.9	2.5	4.7	4	5	87	8.8	18.4
Pecos				Pima S-4			100 Percent*							
3	44	1.46	30	3.9	96	32	7.6	1.5	2.9	4	5	87	7.4	18.5
3	44	1.46	30	3.8	97	31	8.1	1.0	2.2	4	6	90	7.9	17.4
3	44	1.39	31	3.7	101	32	7.4	1.0	2.5	4	6	88	7.1 1/	18.1

* 100 percent selected for tests, less than 100 percent in the area
1/ Cotton stuck to processing rolls

Table 8.--Cotton, American Pima extra long staple: Quality characteristics by production area, crop of 1973--(Continued)

State, Production Area, Chronological Sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 50s gray yarn			Color-50s bleached yarn			Color - 50s dyed yarn		
Grade	Staple	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	Reflectance	Yellowness	Composite	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																		
ARIZONA																		
Peoria					Pima S-4					100 Percent								
3	44	72	40	5.6	4.9	130	120	1	0	66.3	12.4	93	82.7	4.2	95	26.9	26.8	107
4	44	70	39	5.4	4.9	120	110	1	1	65.4	12.9	93	82.7	4.0	96	29.0	25.5	98
Safford					Pima S-4					80 Percent								
4	44	70	37	5.4	4.8	120	120	1	1	63.4	13.0	88	83.3	4.4	96	28.1	25.9	101
3	44	69	39	5.5	4.9	120	120	0	0	65.1	13.0	93	83.0	4.1	96	28.4	26.1	102
3	44	71	39	5.4	5.0	110	110	2	1	65.6	13.0	94	82.7	4.6	93	28.4	26.2	102
Stanfield					Pima S-4					100 Percent								
4	44	72	38	5.7	5.0	130	120	1	1	64.5	12.6	89	82.5	4.3	94	27.3	26.3	105
4	44	70	39	5.5	4.8	110	110	0	1	66.1	12.8	94	83.1	3.8	98	30.1	25.7	97
3	44	71	38	5.6	4.8	100	90	4	4	68.1	12.8	99	81.5	4.7	90	29.9	25.6	97
NEW MEXICO																		
Las Cruces					Pima S-4					80 Percent								
3	44	61	35	5.4	4.8	120	120	0	0	64.3	12.7	89	80.1	3.7	91	27.6	26.8	106
3	44	65	36	5.4	4.8	120	130	1	0	63.6	12.7	87	83.4	4.5	95	26.7	26.6	107
4	44	65	35	5.5	4.8	110	110	3	2	63.3	13.2	88	82.7	4.7	93	27.8	26.4	104
WEST TEXAS																		
El Paso					Pima S-4					100 Percent								
4	44	65	35	5.6	4.9	130	120	1	2	62.9	12.6	86	80.9	4.5	90	27.1	27.0	108
3	44	63	34	5.2	4.6	130	120	1	0	64.1	12.9	89	82.6	4.4	94	28.1	25.9	101
4	44	67	36	5.4	4.8	100	100	3	1	62.8	12.9	86	81.9	4.7	91	27.5	25.5	101
El Paso					Pima S-4					100 Percent								
3	44	67	37	5.5	4.8	120	130	1	2	63.8	12.6	88	80.8	4.2	91	26.8	25.9	104
3	44	63	35	5.3	4.7	120	120	1	1	63.5	12.8	88	82.6	4.1	95	27.4	26.6	106
3	44	66	36	5.2	4.9	120	110	1	1	63.0	13.0	87	82.3	3.9	95	28.9	26.0	100
Pecos					Pima S-4					100 Percent*								
3	44	62	33	5.6	4.8	120	120	3	1	63.5	13.4	90	82.3	4.4	93	27.8	23.4	92
3	44	66	36	5.5	4.8	120	120	1	0	64.8	13.4	94	82.3	4.2	94	28.6	24.6	95
3	44	67	36	5.5	5.2	120	110	1	2	63.3	13.1	88	82.4	4.7	92	27.5	26.0	103

* 100 percent selected for tests, less than 100 percent in the area

Table 9.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 70 short staple samples collected at triweekly intervals from selected gin points, crop of 1973

Item	Grade	Staple	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Grayness	Yellowness	Composite		
Sample Distribution:	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	No.
Mean	92.7	30.9	.96	46.1	4.42	82.3	20.8	6.78	2.15	3.29	2.3	3.3	96.6	6.26	42.4
Standard deviation (±)	6.4	1.0	.05	1.2	.41	4.6	1.3	.64	.86	.88	1.1	.5	5.3	.91	5.9
Correlation Coef. for:															
Classification:															
Grade.....index		-.40	-.58	+.06	-.11	+.05	-.14	-.01	-.58	-.56	-.82	+.14	+.85	-.64	-.41
Staple.....32d inches	-.40		+.82	-.17	+.11	-.13	+.28	+.04	+.37	+.28	+.36	-.25	-.37	+.04	+.71
Fiber length:															
2.5% span.....inches	-.58	+.82		-.26	+.20	.00	+.31	+.04	+.33	+.26	+.53	-.25	-.55	+.15	+.75
50/2.5.....pct	+.06	-.17	-.26		+.24	+.04	-.08	-.07	+.13	+.11	.00	.00	+.04	+.06	-.27
Micronaire.....reading	-.11	+.11	+.20	+.24		+.06	-.24	-.02	-.19	-.27	+.26	-.22	-.28	-.11	-.06
Fiber strength:															
Zero gage.....Mpsi	+.05	-.13	.00	+.04	+.06		+.30	-.59	-.15	-.14	-.06	+.12	+.05	+.12	-.03
1/8" gage.....grams/tex	-.14	+.28	+.31	-.08	-.24	+.30		-.18	+.14	+.15	+.07	+.05	-.08	-.03	+.39
Elongation (1/8").....pct	-.01	+.04	+.04	-.07	-.02	-.59	-.18		-.15	-.14	-.13	-.13	+.15	-.13	+.16
Shirley Analyzer:															
Visible waste.....pct	-.58	+.37	+.33	+.13	-.19	-.15	+.14	-.15		+.94	+.52	+.05	-.49	+.43	+.23
Total waste.....pct	-.56	+.28	+.26	+.11	-.27	-.14	+.15	-.14	+.94		+.48	+.09	-.43	+.50	+.18
Color of raw stock:															
Grayness.....No.	-.82	+.36	+.53	.00	+.26	-.06	+.07	-.13	+.52	+.48		+.04	-.96	+.41	+.25
Yellowness.....No.	+.14	-.25	-.25	.00	-.22	+.12	+.05	-.13	+.05	+.09	+.04		+.02	-.05	-.20
Composite.....index	+.85	-.37	-.55	+.04	-.28	+.05	-.08	+.15	-.49	-.43	-.96	+.02		-.43	-.29
Picker & card waste.....pct	-.64	+.04	+.15	+.06	-.11	+.12	-.03	-.13	+.43	+.50	+.41	-.05	-.43		+.06
Spinning Potential.....No.	-.41	+.71	+.75	-.27	-.06	-.03	+.39	+.16	+.23	+.18	+.25	-.20	-.29	+.06	
Yarn skein strength:															
8s (74 tex).....pounds	-.15	+.61	+.58	.00	-.21	+.31	+.48	-.12	+.30	+.24	+.05	-.08	-.04	-.01	+.63
22s (27 tex).....pounds	-.24	+.67	+.67	-.02	-.12	+.32	+.51	-.17	+.26	+.19	+.13	-.15	-.15	+.01	+.71
Yarn elongation:															
8s (74 tex).....pct	+.14	+.23	+.13	-.13	-.27	-.48	+.10	+.52	+.06	+.09	-.24	-.12	+.27	-.15	+.34
22s (27 tex).....pct	-.17	+.55	+.48	-.14	-.25	-.35	+.23	+.47	+.27	+.23	+.02	-.13	-.01	-.09	+.62
Yarn appearance:															
8s (74 tex).....index	-.13	+.02	+.03	+.12	+.22	+.17	-.22	-.16	-.02	-.09	+.19	-.01	-.17	+.05	-.09
22s (27 tex).....index	+.09	+.01	+.02	+.24	+.30	+.28	-.18	-.04	-.10	-.17	+.07	+.01	+.04	-.13	-.22
Yarn imperfections:															
8s (74 tex).....No.	-.41	+.28	+.35	-.14	-.25	-.09	+.23	-.01	+.46	+.49	+.30	+.11	-.36	+.17	+.35
22s (27 tex).....No.	-.51	+.31	+.33	-.15	-.25	-.13	+.25	-.04	+.57	+.59	+.39	+.11	-.45	+.26	+.36
Color - 22s gray yarn:															
Reflectance.....Rd	+.74	-.33	-.53	+.05	-.28	+.14	-.10	+.03	-.42	-.35	-.86	-.03	+.91	-.29	-.29
Yellowness.....+b	+.01	-.10	-.04	-.06	-.34	+.22	+.23	-.12	+.06	+.06	+.04	+.59	.00	+.08	-.05
Composite.....index	+.71	-.35	-.53	+.05	-.38	+.19	-.01	.00	-.37	-.30	-.80	+.18	+.86	-.26	-.29
Color-22s bleached yarn:															
Reflectance.....Rd	-.11	+.43	+.34	+.04	-.25	-.01	+.12	-.08	+.37	+.33	+.14	-.04	-.10	+.08	+.23
Yellowness.....+b	.00	-.03	+.02	-.20	-.08	-.16	+.09	+.10	-.06	-.03	+.05	+.15	-.04	-.08	+.12
Composite.....index	-.08	+.32	+.23	+.12	-.16	+.05	+.05	-.09	+.29	+.25	+.07	-.08	-.05	+.10	+.11
Color - 22s dyed yarn:															
Reflectance.....Rd	-.52	+.28	+.34	-.17	+.16	-.04	+.15	-.28	+.38	+.32	+.56	-.13	-.64	+.26	+.22
Blueness.....-b	+.19	.00	-.01	+.14	-.05	-.30	-.07	+.45	+.02	+.02	-.24	+.03	+.29	-.09	+.01
Composite.....index	+.35	-.10	-.14	+.20	-.09	-.24	-.12	+.48	-.12	-.10	-.41	+.06	+.48	-.17	-.07

Table 9.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd.	+b	Index	Rd	+b	Index	Rd	-b	Index
Sample Distribution:																	
Mean.....	291.4	90.8	7.7	6.5	124.1	108.4	20.2	16.2	68.1	11.1	92.7	82.5	3.8	96.2	29.1	25.5	97.7
Standard deviation(±)....	18.4	7.6	.5	.5	5.2	10.4	7.3	5.7	2.0	.5	4.4	1.1	.4	3.6	.8	.8	4.0
Correlation Coef. for:																	
Classification:																	
Grade.....index	-.15	-.24	+.14	-.17	-.13	+.09	-.41	-.51	+.74	+.01	+.71	-.11	.00	-.08	-.52	+.19	+.35
Staple.....32d inches	+.61	+.67	+.23	+.55	+.02	+.01	+.28	+.31	-.33	-.10	-.35	+.43	-.03	+.32	+.28	.00	-.10
Fiber length:																	
2.5% span.....inches	+.58	+.67	+.13	+.48	+.03	+.02	+.35	+.33	-.53	-.04	-.53	+.34	+.02	+.23	+.34	-.01	-.14
50/2.5.....pct	.00	-.02	-.13	-.14	+.12	+.24	-.14	-.15	+.05	-.06	+.05	+.04	-.20	+.12	-.17	+.14	+.20
Micronaire.....reading	-.21	-.12	-.27	-.25	+.22	+.30	-.25	-.25	-.28	-.34	-.38	-.25	-.08	-.16	+.16	-.05	-.09
Fiber strength:																	
Zero gage.....Mpsi	+.31	+.32	-.48	-.35	+.17	+.28	-.09	-.13	+.14	+.22	+.19	-.01	-.16	+.05	-.04	-.30	-.24
1/8" gage.....grams/tex	+.48	+.51	+.10	+.23	-.22	-.18	+.23	+.25	-.10	+.23	-.01	+.12	+.09	+.05	+.15	-.07	-.12
Elongation (1/8").....pct	-.12	-.17	+.52	+.47	-.16	-.04	-.01	-.04	+.03	-.12	.00	-.08	+.10	-.09	-.28	+.45	+.48
Shirley Analyzer:																	
Visible waste.....pct	+.30	+.26	+.06	+.27	-.02	-.10	+.46	+.57	-.42	+.06	-.37	+.37	-.06	+.29	+.38	+.02	-.12
Total waste.....pct	+.24	+.19	+.09	+.23	-.09	-.17	+.49	+.59	-.35	+.06	-.30	+.33	-.03	+.25	+.32	+.02	-.10
Color of raw stock:																	
Grayness.....No.	+.05	+.13	-.24	+.02	+.19	+.07	+.30	+.39	-.86	+.04	-.80	+.14	+.05	+.07	+.56	-.24	-.41
Yellowness.....No.	-.08	-.15	-.12	-.13	-.01	+.01	+.11	+.11	-.03	+.59	+.18	-.04	+.15	-.08	-.13	+.03	+.06
Composite.....index	-.04	-.15	+.27	-.01	-.17	+.04	-.36	-.45	+.91	.00	+.86	-.10	-.04	-.05	-.64	+.29	+.48
Picker & card waste...pct	-.01	+.01	-.15	-.09	+.05	-.13	+.17	+.26	-.29	+.08	-.26	+.08	-.08	+.10	+.26	-.09	-.17
Spinning Potential....No.	+.63	+.71	+.34	+.62	-.09	-.22	+.35	+.36	-.29	-.05	-.29	+.23	+.12	+.11	+.22	+.01	-.07
Yarn skein strength:																	
8s (74 tex).....pounds		+.93	+.26	+.57	+.12	+.09	+.29	+.23	-.02	+.07	+.01	+.52	-.16	+.45	+.11	+.11	+.05
22s (27 tex).....pounds	+.93		+.20	+.51	+.10	+.04	+.26	+.24	-.12	+.06	-.09	+.51	-.14	+.42	+.14	-.02	-.07
Yarn elongation:																	
8s (74 tex).....pct	+.26	+.20		+.73	-.22	-.22	+.05	+.04	+.20	-.13	+.15	+.19	+.10	+.10	-.26	+.40	+.43
22s (27 tex).....pct	+.57	+.51	+.73		-.09	-.14	+.29	+.27	-.10	-.04	-.10	+.41	-.03	+.32	-.08	+.38	+.34
Yarn appearance:																	
8s (74 tex).....index	+.12	+.10	-.22	-.09		+.52	-.18	-.19	-.11	+.13	-.04	+.12	-.19	+.15	+.23	-.22	-.28
22s (27 tex).....index	+.09	+.04	-.22	-.14	+.52		-.32	-.38	.00	+.09	+.03	+.10	-.17	+.14	-.13	-.02	+.03
Yarn imperfections:																	
8s (74 tex).....No.	+.29	+.26	+.05	+.29	-.18	-.32		+.91	-.34	+.07	-.30	+.26	+.09	+.15	+.19	+.16	+.05
22s (27 tex).....No.	+.23	+.24	+.04	+.27	-.19	-.38	+.91		-.40	+.03	-.36	+.28	+.01	+.20	+.28	+.13	-.01
Color - 22s gray yarn:																	
Reflectance.....Rd	-.02	-.12	+.20	-.10	-.11	.00	-.34	-.40		-.02	+.93	-.05	-.15	+.02	-.54	+.20	+.37
Yellowness.....+b	+.07	+.06	-.13	-.04	+.13	+.09	+.07	+.03	-.02		+.33	+.06	+.10	-.01	-.14	-.20	-.12
Composite.....index	+.01	-.09	+.15	-.10	-.04	+.03	-.30	-.36	+.93	+.33		-.04	-.09	+.01	-.56	+.12	+.31
Color-22s bleached yarn:																	
Reflectance.....Rd	+.52	+.51	+.19	+.41	+.12	+.10	+.26	+.28	-.05	+.06	-.04		-.50	+.90	+.06	+.26	+.19
Yellowness.....+b	-.16	-.14	+.10	-.03	-.19	-.17	+.09	+.01	-.15	+.10	-.09	-.50		-.80	+.06	-.17	-.16
Composite.....index	+.45	+.42	+.10	+.32	+.15	+.14	+.15	+.20	+.02	-.01	+.01	+.90	-.80		-.01	+.27	+.22
Color - 22s dyed Yarn:																	
Reflectance.....Rd	+.11	+.14	-.26	-.08	+.23	-.13	+.19	+.28	-.54	-.14	-.56	+.06	+.06	-.01		-.29	-.62
Blueness.....-b	+.11	-.02	+.40	+.38	-.22	-.02	+.16	+.13	+.20	-.20	+.12	+.26	-.17	+.27	-.29		+.93
Composite.....index	+.05	-.07	+.43	+.34	-.28	+.03	+.05	-.01	+.37	-.12	+.31	+.19	-.16	+.22	-.62	+.93	

Table 10.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 346 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1973

Item	Grade	Staple	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Grayness	Yellowness	Composite		
	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	No.
Sample Distribution:															
Mean	93.0	34.4	1.09	45.2	4.4	83.6	22.5	6.83	2.03	3.06	2.0	2.8	97.7	5.69	61.4
Standard deviation (±)	4.9	.9	.04	1.5	.45	5.9	1.8	.84	.82	.97	1.0	.6	4.5	1.05	8.9
Correlation Coef. for															
Classification:															
Grade.....index		+.13	+.07	+.04	+.06	+.36	+.35	-.11	-.68	-.67	-.76	+.13	+.80	-.51	+.09
Staple.....32d inches	+.13		+.73	+.10	-.04	+.32	+.46	-.07	-.05	-.11	-.20	-.25	+.19	-.13	+.64
Fiber length:															
2.5% span.....inches	+.07	+.73		+.05	+.01	+.16	+.38	+.11	+.01	-.03	-.13	-.27	+.14	-.14	+.67
50/2.5.....pct	+.04	+.10	+.05		+.48	+.28	+.27	-.30	-.02	-.12	+.06	+.17	-.03	-.09	+.25
Micronaire.....reading	+.06	-.04	+.01	+.48		+.01	-.01	-.12	-.12	-.23	+.15	+.32	-.12	-.04	-.19
Fiber strength:															
Zero gage.....Mpsi	+.36	+.32	+.16	+.28	+.01		+.75	-.66	-.26	-.30	-.30	+.16	+.31	-.16	+.35
1/8" gage.....grams/tex	+.35	+.46	+.38	+.27	-.01	+.75		-.44	-.19	-.22	-.35	+.05	+.36	-.12	+.55
Elongation (1/8").....pct	-.11	-.07	+.11	-.30	-.12	-.66	-.44		+.11	+.16	-.08	-.38	+.08	-.08	-.08
Shirley Analyzer:															
Visible waste.....pct	-.68	-.05	+.01	-.02	-.12	-.26	-.19	+.11		+.93	+.45	-.22	-.50	+.56	-.04
Total waste.....pct	-.67	-.11	-.03	-.12	-.23	-.30	-.22	+.16	+.93		+.43	-.27	-.48	+.56	-.12
Color of raw stock:															
Grayness.....No.	-.76	-.20	-.13	+.06	+.15	-.30	-.35	-.08	+.45	+.43		+.10	-.94	+.40	-.18
Yellowness.....No.	+.13	-.25	-.27	+.17	+.32	+.16	+.05	-.38	-.22	-.27	+.10		-.04	.00	-.21
Composite.....index	+.80	+.19	+.14	-.03	-.12	+.31	+.36	+.08	-.50	-.48	-.94	-.04		-.42	+.18
Picker & card waste.....pct	-.51	-.13	-.14	-.09	-.04	-.16	-.12	-.08	+.56	+.56	+.40	.00	-.42		-.14
Spinning Potential.....No.	+.09	+.64	+.67	+.25	-.19	+.35	+.55	-.08	-.04	-.12	-.18	-.21	+.18	-.14	
Yarn skein strength:															
22s (27 tex).....pounds	+.30	+.62	+.58	+.23	-.24	+.63	+.79	-.24	-.11	-.17	-.37	-.15	+.38	-.22	+.83
50s (12 tex).....pounds	+.25	+.62	+.59	+.24	-.19	+.54	+.73	-.21	-.10	-.18	-.30	-.10	+.32	-.22	+.85
Yarn elongation:															
22s (27 tex).....pct	+.01	+.15	+.32	-.20	-.32	-.36	-.11	+.67	+.12	+.12	-.23	-.39	+.24	-.09	+.33
50s (12 tex).....pct	+.16	+.24	+.33	-.12	-.33	-.19	+.09	+.53	+.03	+.04	-.36	-.31	+.36	-.13	+.42
Yarn Appearance:															
22s (27 tex).....index	+.16	+.04	-.01	+.31	+.47	+.02	.00	+.03	-.16	-.26	-.04	+.06	+.06	-.01	+.06
50s (12 tex).....index	+.15	+.04	-.04	+.45	+.49	+.05	+.04	+.02	-.12	-.22	-.08	+.11	+.10	.00	+.09
Yarn imperfections:															
22s (27 tex).....No.	-.34	-.10	-.01	-.16	-.18	-.13	-.07	-.02	+.34	+.32	+.30	+.10	-.29	+.19	-.08
50s (12 tex).....No.	-.35	-.11	.00	-.22	-.23	-.15	-.10	-.01	+.33	+.33	+.31	+.10	-.32	+.19	-.11
Color - 22s gray yarn:															
Reflectance.....Rd	+.68	+.19	+.17	-.02	-.01	+.24	+.29	+.11	-.35	-.37	-.83	-.11	+.85	-.27	+.16
Yellowness.....+b	+.19	-.16	-.19	+.26	+.22	+.31	+.25	-.47	-.13	-.23	-.05	+.66	+.09	-.02	+.03
Composite.....index	+.70	+.11	+.06	+.07	+.06	+.34	+.35	-.07	-.36	-.42	-.78	+.12	+.82	-.25	+.17
Color-22s bleached yarn:															
Reflectance.....Rd	+.05	+.06	+.24	-.23	-.20	-.31	-.10	+.18	+.01	-.04	-.13	-.03	+.07	.00	+.04
Yellowness.....+b	-.17	-.16	-.26	+.02	-.26	+.11	+.05	-.33	+.14	+.16	+.20	+.26	-.21	+.12	-.05
Composite.....index	+.15	+.11	+.25	-.15	-.03	-.26	-.10	+.30	-.07	-.11	-.19	-.15	+.19	-.07	+.07
Color - 22s dyed yarn:															
Reflectance.....Rd	-.26	-.21	-.16	-.05	-.03	-.05	-.14	-.21	+.08	+.10	+.33	+.05	-.34	+.24	-.19
Blueness.....-b	+.10	.00	+.10	+.05	+.10	-.09	-.05	+.20	.00	-.05	-.14	+.01	+.15	-.07	-.04
Composite.....index	+.18	+.08	+.16	+.06	+.10	-.07	+.01	+.25	-.03	-.08	-.25	.00	+.26	-.16	+.03

Table 10.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd.	+b	Index	Rd	+b	Index	Rd	-b	Index
Sample Distribution:																	
Mean	103.5	33.4	6.4	4.6	103.7	80.3	19.6	14.9	69.1	10.5	92.6	82.5	3.4	97.7	28.7	25.5	98.5
Standard deviation (±)	11.3	5.9	.5	.4	12.6	9.9	7.4	5.5	2.3	.5	4.7	.8	.3	2.6	.9	1.0	4.7
Correlation Coef. for:																	
Classification:																	
Grade.....index	+.30	+.25	+.01	+.16	+.16	+.15	-.34	-.35	+.68	+.19	+.70	+.05	-.17	+.15	-.26	+.10	+.18
Staple.....32d inches	+.62	+.62	+.15	+.24	+.04	+.04	-.10	-.11	+.19	-.16	+.11	+.06	-.16	+.11	-.21	.00	+.08
Fiber length:																	
2.5% span.....inches	+.58	+.59	+.32	+.33	-.01	-.04	-.01	.00	+.17	-.19	+.06	+.24	-.26	+.25	-.16	+.10	+.16
50/2.5.....pct	+.23	+.24	-.20	-.12	+.31	+.45	-.16	-.22	-.02	+.26	+.07	-.23	+.02	-.15	-.05	+.05	+.06
Micronaire.....reading	-.24	-.19	-.32	-.33	+.47	+.49	-.18	-.23	-.01	+.22	+.06	-.20	-.26	-.03	-.03	+.10	+.10
Fiber strength:																	
Zero gage.....Mpsi	+.63	+.54	-.36	-.19	+.02	+.05	-.13	-.15	+.24	+.31	+.34	-.31	+.11	-.26	-.05	-.09	-.07
1/8" gage.....grams/tex	+.79	+.73	-.11	+.09	.00	+.04	-.07	-.10	+.29	+.25	+.35	-.10	+.05	-.10	-.14	-.05	+.01
Elongation (1/8").....pct	-.24	-.21	+.67	+.53	+.03	+.02	-.02	-.01	+.11	-.47	-.07	+.18	-.33	+.30	-.21	+.20	+.25
Shirley Analyzer:																	
Visible waste.....pct	-.11	-.10	+.12	+.03	-.16	-.12	+.34	+.33	-.35	-.13	-.36	+.01	+.14	-.07	+.08	.00	-.03
Total waste.....pct	-.17	-.18	+.12	+.04	-.26	-.22	+.32	+.33	-.37	-.23	-.42	-.04	+.16	-.11	+.10	-.05	-.08
Color of raw stock:																	
Grayness.....No.	-.37	-.30	-.23	-.36	-.04	-.08	+.30	+.31	-.83	-.05	-.78	-.13	+.20	-.19	+.33	-.14	-.25
Yellowness.....No.	-.15	-.10	-.39	-.31	+.06	+.11	+.10	+.10	-.11	+.66	+.12	-.03	+.26	-.15	+.05	+.01	.00
Composite.....index	+.38	+.32	+.24	+.36	+.06	+.10	-.29	-.32	+.85	+.09	+.82	+.07	-.21	+.19	-.34	+.15	+.26
Picker & card waste...pct	-.22	-.22	-.09	-.13	-.01	.00	+.19	+.19	-.27	-.02	-.25	.00	+.12	-.07	+.24	-.07	-.16
Spinning Potential....No.	+.83	+.85	+.33	+.42	+.06	+.09	-.08	-.11	+.16	+.03	+.17	+.04	-.05	+.07	-.19	-.04	+.03
Yarn skein strength:																	
22s (27 tex).....pounds		+.96	+.26	+.41	+.03	+.05	-.10	-.14	+.31	+.13	+.34	-.04	+.03	-.02	-.21	-.04	+.04
50s (12 tex).....pounds	+.96		+.29	+.47	+.07	+.09	-.05	-.09	+.26	+.16	+.30	+.01	+.03	.00	-.21	-.02	+.06
Yarn elongation:																	
22s (27 tex).....pct	+.26	+.29		+.81	+.04	.00	-.06	-.07	+.25	-.28	+.13	+.22	-.19	+.27	-.29	+.12	+.22
50s (12 tex).....pct	+.41	+.47	+.81		+.05	+.01	-.06	-.06	+.34	-.18	+.26	+.22	-.09	+.22	-.32	+.07	+.18
Yarn Appearance:																	
22s (27 tex).....index	+.03	+.07	+.04	+.05		+.74	-.48	-.52	+.13	+.10	+.17	-.13	-.18	+.01	-.03	+.01	+.02
50s (12 tex).....index	+.05	+.09	.00	+.01	+.74		-.49	-.53	+.14	+.16	+.20	-.18	-.13	-.05	-.07	+.04	+.06
Yarn imperfections:																	
22s (27 tex).....No.	-.10	-.05	-.06	-.06	-.48	-.49		+.91	-.29	+.09	-.23	+.09	+.10	+.02	+.11	+.03	-.02
50s (12 tex).....No.	-.14	-.09	-.07	-.06	-.52	-.53	+.91		-.32	+.07	-.27	+.10	+.12	+.01	+.12	+.03	-.03
Color - 22s gray yarn:																	
Reflectance.....Rd	+.31	+.26	+.25	+.34	+.13	+.14	-.29	-.32		+.06	+.92	+.09	-.26	+.19	-.29	+.10	+.18
Yellowness.....+b	+.13	+.16	-.28	-.18	+.10	+.16	+.09	+.07	+.06		+.39	-.04	+.34	-.20	-.08	-.08	-.05
Composite.....index	+.34	+.30	+.13	+.26	+.17	+.20	-.23	-.27	+.92	+.39		+.04	-.12	+.12	-.30	+.03	+.15
Color-22s bleached yarn:																	
Reflectance.....Rd	-.04	+.01	+.22	+.22	-.13	-.18	+.09	+.10	+.09	-.04	+.04		-.25	+.83	+.16	+.28	+.11
Yellowness.....+b	+.03	+.03	-.19	-.09	-.18	-.13	+.10	+.12	-.26	+.34	-.12	-.25		-.66	+.13	-.43	-.44
Composite.....index	-.02	.00	+.27	+.22	+.01	-.05	+.02	+.01	+.19	-.20	+.12	+.83	-.66		.00	+.38	+.32
Color - 22s dyed yarn:																	
Reflectance.....Rd	-.21	-.21	-.29	-.32	-.03	-.07	+.11	+.12	-.29	-.08	-.30	+.16	+.13	.00		-.09	-.46
Blueness.....-b	-.04	-.02	+.12	+.07	+.01	+.04	+.03	+.03	+.10	-.08	+.03	+.28	-.43	+.38	-.09		+.93
Composite.....index	+.04	+.06	+.22	+.18	+.02	+.06	-.02	-.03	+.18	-.05	+.15	+.11	-.44	+.32	-.46	+.93	

Table 11.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 40 long staple samples, collected at triweekly intervals rom selected gin points, crop of 1973

Item	Grade	Staple	Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Com-posite		
Sample Distribution:	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	No.
Mean	92.3	35.2	1.13	44.5	4.15	85.6	24.4	6.64	2.52	3.54	2.0	2.9	98.0	8.29	73.60
Standard deviation (±)	6.0	1.1	.03	1.3	.61	5.8	2.1	.56	1.15	1.29	1.2	.6	5.4	1.05	14.43
Correlation Coef. for:															
Classification:															
Grade.....index		+.48	+.08	-.07	-.54	+.63	+.63	-.49	-.79	-.76	-.83	+.28	+.83	-.72	+.53
Staple.....32d inches	+.48		+.67	+.13	-.53	+.72	+.83	-.59	-.18	-.13	-.60	-.09	+.52	-.29	+.79
Fiber length:															
2.5% span.....inches	+.08	+.67		+.02	-.24	+.48	+.55	-.54	+.01	+.07	-.20	-.12	+.11	-.14	+.60
50/2.5.....pct	-.07	+.13	+.02		+.46	+.05	+.07	+.15	-.04	-.04	+.06	+.21	-.09	-.09	+.19
Micronaire.....reading	-.54	-.53	-.24	+.46		-.43	-.57	+.36	+.17	+.11	+.65	+.34	-.64	+.09	-.54
Fiber strength:															
Zero gage.....Mpsi	+.63	+.72	+.48	+.05	-.43		+.84	-.67	-.45	-.45	-.65	+.11	+.57	-.57	+.71
1/8" gage.....grams/tex	+.63	+.83	+.55	+.07	-.57	+.84		-.63	-.39	-.36	-.63	.00	+.56	-.47	+.86
Elongation (1/8").....pct	-.49	-.59	-.54	+.15	+.36	-.67	-.63		+.26	+.20	+.45	-.05	-.38	+.38	-.51
Shirley Analyzer:															
Visible waste.....pct	-.79	-.18	+.01	-.04	+.17	-.45	-.39	+.26		+.96	+.69	-.40	-.73	+.73	-.36
Total waste.....pct	-.76	-.13	+.07	-.04	+.11	-.45	-.36	+.20	+.96		+.62	-.38	-.65	+.78	-.33
Color of raw stock:															
Grayness.....No.	-.83	-.60	-.20	+.06	+.65	-.65	-.63	+.45	+.69	+.62		+.07	-.96	+.55	-.61
Yellowness.....No.	+.28	-.09	-.12	+.21	+.34	+.11	.00	-.05	-.40	-.38	+.07		-.03	-.48	+.03
Composite.....index	+.83	+.52	+.11	-.09	-.64	+.57	+.56	-.38	-.73	-.65	-.96	-.03		-.51	+.55
Picker & card waste.....pct	-.72	-.29	-.14	-.09	+.09	-.57	-.47	+.38	+.73	+.78	+.55	-.48	-.51		-.48
Spinning Potential.....No.	+.53	+.79	+.60	+.19	-.54	+.71	+.86	-.51	-.36	-.33	-.61	+.03	+.55	-.48	
Yarn skein strength:															
22s (27 tex).....pounds	+.63	+.88	+.60	+.12	-.60	+.84	+.93	-.57	-.42	-.38	-.72	+.02	+.64	-.50	+.92
50s (12 tex).....pounds	+.58	+.89	+.61	+.12	-.62	+.82	+.90	-.54	-.37	-.32	-.70	-.02	+.61	-.45	+.93
Yarn elongation:															
22s (27 tex).....pct	+.11	+.35	+.26	+.05	-.51	+.23	+.31	-.01	-.01	+.01	-.32	-.29	+.30	+.05	+.53
50s (12 tex).....pct	+.02	+.54	+.38	+.18	-.48	+.30	+.43	.00	+.11	+.19	-.31	-.11	+.25	+.14	+.56
Yarn Appearance:															
22s (27 tex).....index	-.41	-.47	-.32	+.38	+.87	-.46	-.59	+.45	+.10	+.01	+.54	+.28	-.51	+.04	-.51
50s (12 tex).....index	-.36	-.33	-.32	+.42	+.80	-.38	-.48	+.44	+.07	+.02	+.41	+.29	-.43	+.04	-.40
Yarn imperfections:															
22s (27 tex).....No.	+.06	+.26	+.25	-.34	-.49	+.25	+.28	-.27	+.19	+.19	-.20	-.34	+.15	+.12	+.25
50s (12 tex).....No.	+.09	+.32	+.38	-.34	-.55	+.26	+.31	-.34	+.16	+.19	-.27	-.30	+.20	+.10	+.34
Color - 22s gray yarn:															
Reflectance.....Rd	+.61	+.46	+.06	-.03	-.62	+.39	+.43	-.17	-.54	-.48	-.87	-.24	+.87	-.30	+.48
Yellowness.....+b	+.45	+.04	-.13	+.08	+.04	+.35	+.20	-.20	-.52	-.53	-.20	+.77	+.21	-.60	+.20
Composite.....index	+.75	+.47	+.01	.00	-.58	+.51	+.49	-.24	-.69	-.64	-.89	+.06	+.90	-.51	+.52
Color - 22s bleached yarn:															
Reflectance.....Rd	+.10	+.13	+.05	-.14	-.48	+.04	+.05	-.02	+.13	+.19	-.30	-.32	+.27	+.03	+.19
Yellowness.....+b	+.14	-.10	-.31	+.07	+.16	+.01	+.05	-.18	-.09	-.16	+.10	+.33	-.15	-.26	-.07
Composite.....index	+.01	+.15	+.16	-.08	-.41	+.02	+.03	+.10	+.15	+.22	-.25	-.39	+.25	+.14	+.18
Color - 22s dyed yarn:															
Reflectance.....Rd	-.39	-.10	+.04	+.10	+.35	-.34	-.35	+.07	+.51	+.52	+.41	-.12	-.43	+.42	-.42
Blueness.....-b	+.11	-.15	-.14	.00	-.09	-.17	-.07	-.07	-.03	+.06	+.01	-.08	+.07	+.12	-.10
Composite.....index	+.27	-.10	-.14	-.04	-.23	-.03	+.09	-.12	-.23	-.16	-.17	-.04	+.25	-.04	+.08

Table 11.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Reflectance	Yellowness	Composite	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd.	+b	Index	Rd	+b	Index	Rd	-b	Index
Sample Distribution:																	
Mean.....	115.0	38.2	6.4	4.8	108.0	85.8	16.9	12.8	69.1	10.9	93.6	83.1	3.5	98.8	28.5	25.2	97.6
Standard deviation(±)...	16.0	7.6	.3	.3	15.7	11.1	6.2	4.5	2.1	.5	4.6	.7	.3	2.4	.9	1.0	4.3
Correlation Coef. for:																	
Classification:																	
Grade.....index	+.63	+.58	+.11	+.02	-.41	-.36	+.06	+.09	+.61	+.45	+.75	+.10	+.14	+.01	-.39	+.11	+.27
Staple.....32d inches	+.88	+.89	+.35	+.54	-.47	-.33	+.26	+.32	+.46	+.04	+.47	+.13	-.10	+.15	-.10	-.15	-.10
Fiber length:																	
2.5% span.....inches	+.60	+.61	+.26	+.38	-.32	-.32	+.25	+.38	+.06	-.13	+.01	+.05	-.31	+.16	+.04	-.14	-.14
50/2.5..... pct	+.12	+.12	+.05	+.18	+.38	+.42	-.34	-.34	-.03	+.08	.00	-.14	+.07	-.08	+.10	.00	-.04
Micronaire.....reading	-.60	-.62	-.51	-.48	+.87	+.80	-.49	-.55	-.62	+.04	-.58	-.48	+.16	-.41	+.35	-.09	-.23
Fiber strength:																	
Zero gage.....Mpsi	+.84	+.82	+.23	+.30	-.46	-.38	+.25	+.26	+.39	+.35	+.51	+.04	+.01	+.02	-.34	-.17	-.03
1/8" gage.....grams/tex	+.93	+.90	+.31	+.43	-.59	-.48	+.28	+.31	+.43	+.20	+.49	+.05	+.05	+.03	-.35	-.07	+.09
Elongation (1/8")...pct	-.57	-.54	-.01	.00	+.45	+.44	-.27	-.34	-.17	-.20	-.24	-.02	-.18	+.10	+.07	-.07	-.12
Shirley Analyzer:																	
Visible waste.....pct	-.42	-.37	-.01	+.11	+.10	+.07	+.19	+.16	-.54	-.52	-.69	+.13	-.09	+.15	+.51	-.03	-.23
Total waste.....pct	-.38	-.32	+.01	+.19	+.01	+.02	+.19	+.19	-.48	-.53	-.64	+.19	-.16	+.22	+.52	+.06	-.16
Color of raw stock:																	
Grayness.....No.	-.72	-.70	-.32	-.31	+.54	+.41	-.20	-.27	-.87	-.20	-.89	-.30	+.10	-.25	+.41	+.01	-.17
Yellowness.....No.	+.02	-.02	-.29	-.11	+.28	+.29	-.34	-.30	-.24	+.77	+.06	-.32	+.33	-.39	-.12	-.08	-.04
Composite.....index	+.64	+.61	+.30	+.25	-.51	-.43	+.15	+.20	+.87	+.21	+.90	+.27	-.15	+.25	-.43	+.07	+.25
Picker & card waste..pct	-.50	-.45	+.05	+.14	+.04	+.04	+.12	+.10	-.30	-.60	-.51	+.03	-.26	+.14	+.42	+.12	-.04
Spinning Potential...No.	+.92	+.93	+.53	+.56	-.51	-.40	+.25	+.34	+.48	+.20	+.52	+.19	-.07	+.18	-.42	-.10	+.08
Yarn skein strength:																	
22s (27 tex).....pounds		+.98	+.48	+.55	-.58	-.46	+.29	+.35	+.54	+.24	+.60	+.17	-.04	+.15	-.38	-.14	+.03
50s (12 tex).....pounds	+.98		+.49	+.63	-.58	-.43	+.33	+.40	+.55	+.22	+.60	+.21	-.09	+.20	-.37	-.14	+.02
Yarn elongation:																	
22s (27 tex).....pct	+.48	+.49		+.58	-.39	-.42	+.22	+.29	+.44	-.08	+.35	+.39	-.34	+.44	-.29	+.05	+.17
50s (12 tex).....pct	+.55	+.63	+.58		-.49	-.34	+.22	+.36	+.38	-.03	+.35	+.28	-.30	+.34	-.20	-.27	-.17
Yarn Appearance:																	
22s (27 tex).....index	-.58	-.58	-.39	-.49		+.86	-.51	-.57	-.41	+.04	-.38	-.47	+.16	-.41	+.28	-.15	-.27
50s (12 tex).....index	-.46	-.43	-.42	-.34	+.86		-.50	-.54	-.32	+.05	-.28	-.39	+.17	-.35	+.18	-.19	-.26
Yarn imperfections:																	
22s (27 tex).....No.	+.29	+.33	+.22	+.22	-.51	-.50		+.87	+.15	-.01	+.13	+.41	-.09	+.34	-.12	+.23	+.27
50s (12 tex).....No.	+.35	+.40	+.29	+.36	-.57	-.54	+.87		+.22	-.02	+.19	+.29	-.11	+.23	-.12	+.10	+.16
Color - 22s gray yarn:																	
Reflectance.....Rd	+.54	+.55	+.44	+.38	-.41	-.32	+.15	+.22		.00	+.93	+.32	-.20	+.31	-.46	-.08	+.12
Yellowness.....+b	+.24	+.22	-.08	-.03	+.04	+.05	-.01	-.02	.00		+.35	-.14	+.42	-.32	-.37	-.02	+.13
Composite.....index	+.60	+.60	+.35	+.35	-.38	-.28	+.13	+.19	+.93	+.35		+.24	-.03	+.17	-.57	-.10	+.15
Color-22s bleached yarn:																	
Reflectance.....Rd	+.17	+.21	+.39	+.28	-.47	-.39	+.41	+.29	+.32	-.14	+.24		-.29	+.90	-.05	+.30	+.30
Yellowness.....+b	-.04	-.09	-.34	-.30	+.16	+.17	-.09	-.11	-.20	+.42	-.03	-.29		-.66	-.08	-.16	-.12
Composite.....index	+.15	+.20	+.44	+.34	-.41	-.35	+.34	+.23	+.31	-.32	+.17	+.90	-.66		-.02	+.30	+.29
Color - 22s dyed yarn:																	
Reflectance.....Rd	-.38	-.37	-.29	-.20	+.28	+.18	-.12	-.12	-.46	-.37	-.57	-.05	-.08	-.02		+.12	-.30
Blueness.....-b	-.14	-.14	+.05	-.27	-.15	-.19	+.23	+.10	-.08	-.02	-.10	+.30	-.16	+.30	+.12		+.91
Composite.....index	+.03	+.02	+.17	-.17	-.27	-.26	+.27	+.16	+.12	+.13	+.15	+.30	-.12	+.29	-.30	+.91	

Table 11a--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on combed yarns from 40 long staple samples from selected gin points, crop of 1973

Statistical Items	Picker & Card Waste	Comber waste	Combed Yarn Values							
			Yarn strength		Yarn elongation		Yarn appearance		Yarn imperfections	
			22s	50s	22s	50s	22s	50s	22s	50s
Sample Distribution:	Pct.	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Mean.....	8.29	16.57	131.7	47.2	6.8	5.2	117.8	96.0	8.6	6.3
Standard deviation (±)....	1.05	1.46	16.0	7.3	.3	.3	14.2	11.3	3.4	2.5
Correlation Coeff. for										
Classification:										
Grade.....index	-.72	-.32	+.67	+.64	-.01	+.13	-.45	-.43	+.07	+.19
Staple.....32d inches	-.29	-.60	+.87	+.81	+.07	+.40	-.42	-.45	+.32	+.25
Fiber length:										
2.5% span.....inches	-.14	-.54	+.57	+.56	+.09	+.21	-.32	-.34	+.43	+.26
50/2.5 unif.....pct	-.09	-.58	+.06	.00	+.01	+.01	+.22	+.40	-.30	-.33
Micronaire.....reading	+.09	.00	-.63	-.58	-.42	-.49	+.77	+.85	-.60	-.56
Fiber strength:										
Zero gage.....Mpsi	-.57	-.53	+.87	+.84	-.07	+.20	-.45	-.35	+.33	+.33
1/8" gage.....grams/tex	-.47	-.66	+.94	+.86	+.06	+.32	-.58	-.56	+.41	+.35
Elongation (1/8").....pct	+.38	+.25	-.60	-.59	+.39	.00	+.49	+.43	-.41	-.38
Shirley Analyzer:										
Visible waste.....pct	+.73	+.40	-.44	-.45	+.07	+.05	+.19	+.14	+.13	+.03
Total waste.....pct	+.78	+.36	-.40	-.45	+.11	+.05	+.09	+.06	+.19	+.09
Color of raw stock:										
Grayness.....No.	+.55	+.37	-.75	-.71	-.23	-.32	+.53	+.46	-.25	-.32
Yellowness.....No.	-.48	-.15	+.01	+.02	-.29	-.20	+.25	+.21	-.37	-.27
Composite.....index	-.51	-.29	+.67	+.62	+.21	+.30	-.56	-.50	+.22	+.28
Picker & card waste....pct		+.45	-.50	-.57	+.17	-.05	+.07	+.05	+.11	+.01
Spinning Potential.....No.	-.48	-.70	+.89	+.84	+.25	+.54	-.54	-.50	+.43	+.32
Comber waste.....pct	+.45		-.62	-.57	.00	-.19	+.16	+.09	-.01	+.06
Combed yarn strength:										
22s (27 tex).....pounds	-.50	-.62		+.93	+.18	+.44	-.58	-.54	+.44	+.38
50s (12 tex).....pounds	-.57	-.57	+.93		+.11	+.52	-.46	-.45	+.41	+.38
Combed yarn elongation:										
22s (27 tex).....pct	+.17	.00	+.18	+.11		+.53	-.26	-.26	+.35	+.27
50s (12 tex).....pct	-.05	-.19	+.44	+.52	+.53		-.34	-.30	+.34	+.24
Combed yarn appearance:										
22s (27 tex).....index	+.07	+.16	-.58	-.46	-.26	-.34		+.85	-.61	-.47
50s (12 tex).....index	+.05	+.09	-.54	-.45	-.26	-.30	+.85		-.69	-.61
Combed yarn imperfections:										
22s (27 tex).....No.	+.12	-.01	+.44	+.41	+.35	+.34	-.61	-.69		+.88
50s (12 tex).....No.	+.10	+.06	+.38	+.38	+.27	+.24	-.47	-.61	+.88	

Table 12.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 70 short staple samples, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.3	291	91	7.7	6.5	124	108	20	16	42	93	96	98
Grade index	93	93	93	93	93	93	93	93	93	93	93	93	93
Staple length	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9
Micronaire	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Fiber strength (0 gage)	82	82	82	82	82	82	82	82	82	82	82	82	82
Uniformity ratio	46	46	46	46	46	46	46	46	46	46	46	46	46
Standard Deviations (±) for:													
Dependent variable	.91	18.4	7.6	.48	.49	5.2	10.4	7.3	5.7	5.9	4.4	3.6	4.0
Grade index	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Staple length	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Micronaire	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
Fiber strength (0 gage)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Uniformity ratio	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Simple Correlation Coef. for:													
Grade index	-.64	-.15	-.24	+.14	-.17	-.13	+.09	-.41	-.51	-.41	+.71	-.08	+.35
Staple length	+.04	+.61	+.67	+.23	+.55	+.02	+.01	+.28	+.31	+.71	-.35	+.32	-.10
Micronaire	-.11	-.21	-.12	-.27	-.25	+.22	+.30	-.25	-.25	-.06	-.38	-.16	-.09
Fiber strength (0 gage)	+.12	+.31	+.32	-.48	-.35	+.17	+.28	-.09	-.13	-.03	+.19	+.05	-.24
Uniformity ratio	+.06	.00	-.02	-.13	-.14	+.12	+.24	-.14	-.15	-.27	+.05	+.12	+.20
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.68	.62	.67	.34	.55	.14	.10	.43	.52	.72	.71	.32	.35
Partial Cor. Coef. for:													
Grade index	-.68	+.13	+.04	+.26	+.05	-.13	+.10	-.34	-.44	-.21	+.66	+.05	+.34
Staple length	-.30	+.61	+.65	+.31	+.53	-.04	+.04	+.14	+.14	+.65	-.11	+.31	+.05
Beta Coefficients for:													
Grade index	-.74	+.11*	+.03*	+.27*	+.05*	-.15*	+.11*	-.35*	-.46	-.16*	+.67	+.05*	+.37*
Staple length	-.25*	+.65	+.68	+.33*	+.57	-.04*	+.05*	+.14*	+.13*	+.64	-.08*	+.34*	+.05*
Regression Equation:													
Constant (a)	+22.75	-96.90	-67.40	+1.05	-2.17	+141.45	+77.45	+26.52	+32.28	-57.18	+60.83	+57.17	+71.02
Regression Coef. for:													
Grade index	-.10	+.31	+.04	+.02	+.00	-.12	+.17	-.40	-.41	-.15	+.46	+.03	+.23
Staple length	-.22	+11.62	+4.99	+.15	+.27	-.20	+.48	+.98	+.70	+3.66	-.35	+1.18	+.18
Standard error (±)	.67	14.40	5.61	.45	.41	5.20	10.39	6.58	4.82	4.07	3.07	3.42	3.70
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.70	.68	.70	.44	.63	.25	.32	.53	.61	.74	.77	.37	.36
Partial Cor. Coef. for:													
Grade index	-.69	+.11	+.02	+.25	+.03	-.12	+.13	-.38	-.49	-.23	+.68	+.03	+.34
Staple length	-.29	+.64	+.67	+.34	+.57	-.05	+.02	+.17	+.17	+.66	-.09	+.33	+.05
Micronaire	-.23	-.35	-.27	-.29	-.37	+.21	+.31	-.34	-.37	-.22	-.43	-.20	-.06
Beta Coefficients for:													
Grade index	-.75	+.09*	+.02*	+.25*	+.02*	-.13*	+.13*	-.38	-.49	-.17*	+.65	+.03*	+.36*
Staple length	-.23*	+.68	+.70	+.36	+.59	-.06*	+.02*	+.16*	+.15*	+.66	-.06*	+.35*	+.05*
Micronaire	-.17*	-.27	-.20*	-.28*	-.31	+.21*	+.31*	-.31	-.32	-.15*	-.31	-.19*	-.06*
Regression Equation:													
Constant (a)	+24.22	-49.08	-53.06	+2.31	-.72	+130.96	+46.87	+48.14	+49.39	-48.62	+73.56	+63.77	+73.23
Regression Coef. for:													
Grade index	-.11	+.25	+.02	+.02	.00	-.11	+.21	-.43	-.43	-.16	+.44	+.02	+.22
Staple length	-.21	+12.00	+5.11	+.16	+.28	-.28	+.24	+1.15	+.83	+3.73	-.25	+1.23	+.20
Micronaire	-.37	-12.12	-3.63	-.32	-.37	+2.66	+7.75	-5.48	-4.34	-2.17	-3.23	-1.67	-.56
Standard Error (±)	.66	13.51	5.41	.43	.38	5.08	9.89	6.18	4.47	3.97	2.77	3.35	3.69

Table 12.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.71	.79	.82	.62	.68	.29	.41	.53	.62	.74	.79	.39	.44
Partial Coef. for:													
Grade index.....	-.69	+.14	+.05	+.28	+.03	-.12	+.13	-.38	-.49	-.23	+.68	+.03	+.35
Staple length.....	-.27	+.74	+.77	+.32	+.57	-.03	+.06	+.17	+.16	+.67	-.05	+.34	+.02
Micronaire.....	-.24	-.44	-.37	-.29	-.36	+.20	+.30	-.34	-.37	-.23	-.46	-.21	-.04
Fiber str. (0 gage).....	+.18	+.56	+.59	-.49	-.33	+.16	+.28	-.03	-.09	+.11	+.28	+.12	-.27
Beta Coefficients for:													
Grade index.....	-.74	+.09*	+.03*	+.25*	+.03*	-.13*	+.13*	-.38	-.49	-.17*	+.63	+.03*	+.36*
Staple length.....	-.22*	+.73	+.76	+.30*	+.55	-.03*	+.06*	+.16*	+.14*	+.67	-.03*	+.37*	+.02*
Micronaire.....	-.18*	-.31	-.23	-.24*	-.29	+.20*	+.29*	-.31	-.31	-.16*	-.32	-.20*	-.04*
Fiber str. (0 gage).....	+.13*	+.42	+.43	-.44	-.26*	+.16*	+.26*	-.03*	-.07*	+.07*	+.18*	+.11*	-.25*
Regression Equation:													
Constant (a).....	+21.50	-214.50	-123.60	+6.81	+1.97	+113.08	+11.49	+52.79	+57.88	-57.76	+58.56	+55.39	+94.42
Regression Coef. for:													
Grade index.....	-.11	+.27	+.04	+.02	.00	-.11	+.21	-.43	-.43	-.16	+.43	+.02	+.22
Staple length.....	-.19	+13.01	+5.53	+.14	+.26	-.17	+.60	+1.13	+.78	+3.78	-.15	+1.28	+.07
Micronaire.....	-.39	-13.50	-4.22	-.28	-.34	+2.51	+7.25	-5.44	-4.27	-2.24	-3.37	-1.74	-.38
Fiber str. (0 gage)....	+.03	+1.68	+.71	-.05	-.03	+.18	+.60	-.05	-.09	+.09	+.17	+.09	-.22
Standard Error (±).....	.64	11.17	4.36	.38	.36	5.01	9.51	6.18	4.46	3.95	2.66	3.33	3.56
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.72	.81	.83	.62	.68	.30	.44	.53	.62	.75	.80	.45	.48
Partial Cor. Coef. for:													
Grade index.....	-.70	+.14	+.05	+.28	+.03	-.12	+.13	-.38	-.49	-.23	+.68	+.03	+.35
Staple length.....	-.24	+.76	+.78	+.32	+.57	-.02	+.09	+.16	+.16	+.66	-.03	+.38	+.06
Micronaire.....	-.28	-.51	-.43	-.28	-.36	+.17	+.25	-.33	-.35	-.18	-.47	-.27	-.11
Fiber str. (0 gage).....	+.19	+.58	+.61	-.49	-.33	+.16	+.28	-.03	-.09	+.11	+.28	+.12	-.27
Uniformity ratio.....	+.16	+.30	+.26	-.02	+.05	+.08	+.18	-.01	-.02	-.17	+.12	+.25	+.23
Beta Coefficients for:													
Grade index.....	-.74	+.09*	+.03*	+.25*	+.03*	-.13*	+.13*	-.38	-.49	-.17*	+.62	+.03*	+.36
Staple length.....	-.19*	+.77	+.79	+.29*	+.56	-.02*	+.09*	+.16*	+.14*	+.64	-.02*	+.41	+.06*
Micronaire.....	-.21*	-.36	-.27	-.24*	-.30	+.18*	+.24*	-.31	-.31	-.13*	-.34	-.27*	-.10*
Fiber str. (0 gage).....	+.13*	+.42	+.43	-.44	-.26*	+.16*	+.26*	-.03*	-.07*	+.07*	+.18*	+.11*	-.25*
Uniformity ratio.....	+.12*	+.19*	+.16*	-.02*	+.04*	+.08*	+.17*	-.01*	-.02*	-.12*	+.08*	+.25*	+.22*
Regression Equation:													
Constant (a).....	+17.16	-354.94	-171.62	+7.15	+1.22	+96.67	-82.74	+56.25	+61.74	-29.62	+45.23	+20.07	+60.00
Regression Coef. for:													
Grade index.....	-.11	+.26	+.03	+.02	.00	-.11	+.21	-.43	-.43	-.15	+.43	+.02	+.22
Staple length.....	-.17	+13.64	+5.75	+.14	+.27	-.10	+.93	+1.11	+.76	+3.65	-.09	+1.44	+.22
Micronaire.....	-.46	-15.78	-5.00	-.28	-.36	+2.24	+6.10	-5.38	-4.20	-1.79	-3.58	-2.32	-.94
Fiber str. (0 gage)....	+.03	+1.68	+.71	-.05	-.03	+.18	+.60	-.05	-.09	+.09	+.17	+.09	-.22
Uniformity ratio.....	+.09	+2.86	+.98	-.01	+.02	+.33	+1.45	-.07	-.08	-.57	+.27	+.72	+.70
Standard Error (±).....	.64	10.65	4.20	.38	.36	5.00	9.36	6.18	4.46	3.89	2.64	3.22	3.46

Table 13.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 70 short staple samples, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable	6.3	291	91	7.7	6.5	124	108	20	16	42	93	96	98
Grayness	2	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness	3	3	3	3	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
2.5% span length	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96
Micronaire	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Standard Deviation (±) for:													
Dependent variable	.91	18.4	7.6	.48	.49	5.2	10.4	7.3	5.7	5.9	4.4	3.6	4.0
Grayness	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Yellowness	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
Nonlint content (S.A.)	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
2.5% span length	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
Micronaire	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
Simple Correlation Coef. for:													
Grayness	+.41	+.05	+.13	-.24	+.02	+.19	+.07	+.30	+.39	+.25	-.80	+.07	-.41
Yellowness	-.05	-.08	-.15	-.12	-.13	-.01	+.01	+.11	+.11	-.20	+.18	-.08	+.06
Nonlint content (S.A.)	+.50	+.24	+.19	+.09	+.23	-.09	-.17	+.49	+.59	+.18	-.30	+.25	-.10
2.5% span length	+.15	+.58	+.67	+.13	+.48	+.03	+.02	+.35	+.33	+.75	-.53	+.23	-.14
Micronaire	-.11	-.21	-.12	-.27	-.25	+.22	+.30	-.25	-.25	-.06	-.38	-.16	-.09
Multiple Cor. Data for: DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS													
Multiple Cor. Coef.	.42	.09	.20	.27	.13	.19	.07	.31	.40	.33	.83	.11	.42
Partial Cor. Coef. for:													
Grayness	+.42	+.05	+.13	-.24	+.03	+.19	+.07	+.30	+.39	+.27	-.83	+.08	-.42
Yellowness	-.07	-.08	-.16	-.12	-.13	-.01	+.01	+.10	+.10	-.22	+.36	-.09	+.09
Beta Coefficients for:													
Grayness	+.42	+.05*	+.13*	-.24*	+.03*	+.19*	+.07*	+.30*	+.39	+.26*	-.81	+.08*	-.42
Yellowness	-.06*	-.08*	-.15*	-.12*	-.13*	-.01*	+.01*	+.09*	+.09*	-.21*	+.21	-.09*	+.08*
Regression Equation:													
Constant (a)	+5.81	+299.35	+96.45	+8.35	+6.92	+122.42	+106.14	+10.86	+7.96	+47.38	+94.14	+97.72	+99.22
Regression Coef. for:													
Grayness	+.36	+.85	+.94	-.11	+.01	+.95	+.69	+2.04	+2.09	+1.45	-3.37	+.26	-1.56
Yellowness	-.11	-2.97	-2.35	-.11	-.13	-.14	+.21	+1.39	+1.03	-2.51	+1.89	-.63	+.64
Standard Error (±)	.83	18.27	7.41	.46	.49	5.15	10.42	6.90	5.17	5.55	2.43	3.59	3.59
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.)													
Multiple Cor. Coef.	.54	.27	.26	.36	.30	.28	.24	.50	.60	.34	.84	.28	.43
Partial Cor. Coef. for:													
Grayness	+.23	-.08	+.04	-.33	-.11	+.27	+.17	+.09	+.16	+.19	-.81	-.06	-.42
Yellowness	-.11	-.10	-.17	-.14	-.16	.00	+.03	+.07	+.07	-.23	+.35	-.11	+.08
Nonlint (S.A.)	+.38	+.26	+.17	+.25	+.27	-.21	-.23	+.41	+.49	+.10	+.14	+.25	+.12
Beta Coefficients for:													
Grayness	+.23*	-.09*	+.04*	-.37*	-.12*	+.30*	+.19*	+.09*	+.15*	+.21*	-.85	-.06*	-.47
Yellowness	-.09*	-.10*	-.17*	-.13*	-.15*	.00*	+.03*	+.06*	+.06*	-.22*	+.21	-.11*	+.07*
Nonlint (S.A.)	+.40	+.29*	+.19*	+.27*	+.30*	-.23*	-.26*	+.44	+.51	+.10*	+.09*	+.29*	+.12*
Regression Equation:													
Constant (a)	+5.00	+287.35	+93.29	+8.06	+6.59	+125.11	+112.22	+3.72	+1.52	+46.02	+93.29	+95.39	+98.17
Regression Coef. for:													
Grayness	+.20	-1.57	+.30	-.17	-.06	+1.50	+1.91	+.60	+.79	+1.17	-3.54	-.21	-1.77
Yellowness	-.17	-3.73	-2.55	-.13	-.15	+.03	+.60	+.93	+.63	-2.59	+1.83	-.77	+.57
Nonlint (S.A.)	+.41	+6.11	+1.61	+.15	+.17	-1.37	-3.10	+3.64	+3.28	+.69	+.44	+1.19	+.54
Standard Error (±)	.77	17.65	7.31	.45	.47	5.04	10.14	6.31	4.51	5.53	2.40	3.47	3.56

*Statistically insignificant

Table 13.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH													
Multiple Cor. Coef.	.56	.72	.74	.45	.61	.29	.24	.56	.63	.77	.84	.34	.45
Partial Cor. Coef. for:													
Grayness	+.27	-.44	-.38	-.42	-.37	+.27	+.15	-.05	+.05	-.25	-.74	-.15	-.43
Yellowness	-.15	+.17	+.10	-.04	+.04	-.03	+.03	+.17	+.14	+.02	+.31	-.04	+.12
Nonlint (S.A.)	+.39	+.31	+.20	+.25	+.30	-.20	-.23	+.41	+.49	+.10	+.14	+.25	+.11
2.5% span length	-.14	+.69	+.72	+.29	+.56	-.09	-.01	+.29	+.21	+.73	-.10	+.21	+.14
Beta Coefficients for:													
Grayness	+.31*	-.42	-.35	-.54	-.40	+.36*	+.20*	-.06*	+.05*	-.22*	-.81	-.19*	-.56
Yellowness	-.13*	+.13*	+.07*	-.04*	+.03*	-.03*	+.03*	+.15*	+.11*	+.02*	+.19*	-.04*	+.11*
Nonlint (S.A.)	+.40	+.26*	+.16*	+.26*	+.28*	-.23*	-.26*	+.43	+.50	+.07*	+.09*	+.28*	+.11*
2.5% span length	-.15*	+.82	+.86	+.34*	+.66	-.10*	-.01*	+.31*	+.21*	+.86	-.07*	+.25*	+.16*
Regression Equation:													
Constant (a)	+7.76	-28.15	+42.17	+4.68	-.21	+136.35	+113.71	-43.34	-23.26	-58.21	+99.25	+76.74	+85.43
Regression Coef. for:													
Grayness	+.27	-7.33	-2.51	-.24	-.19	+1.78	+1.95	-.40	+.24	-1.21	-3.38	-.65	-2.09
Yellowness	-.24	+4.62	+1.05	-.04	+.03	-.28	+.56	+2.19	+1.29	+.20	+1.67	-.27	+.91
Nonlint (S.A.)	+.42	+5.51	+1.35	+.14	+.16	-1.35	-3.09	+3.55	+3.23	+.49	+.45	+1.15	+.51
2.5% span length	-2.80	+314.04	+135.59	+3.39	+6.78	-11.36	-1.50	+47.16	+24.88	+104.80	-6.05	+18.79	+12.87
Standard Error (±)	.76	12.83	5.10	.43	.39	5.02	10.14	6.04	4.41	3.76	2.39	3.39	3.53
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.56	.73	.76	.48	.65	.31	.32	.58	.65	.79	.84	.36	.46
Partial Cor. Coef. for:													
Grayness	+.29	-.33	-.27	-.34	-.25	+.21	+.05	+.04	+.13	-.13	-.69	-.09	-.43
Yellowness	-.17	+.12	+.05	-.08	-.02	.00	+.08	+.12	+.09	-.04	+.27	-.06	+.14
Nonlint (S.A.)	+.31	+.19	+.08	+.15	+.16	-.14	-.11	+.30	+.38	-.04	+.04	+.18	+.14
2.5% span length	-.14	+.70	+.73	+.30	+.57	-.09	-.01	+.30	+.22	+.75	-.10	+.21	+.14
Micronaire	-.12	-.24	-.24	-.18	-.27	+.10	+.23	-.21	-.21	-.28	-.21	-.12	+.10
Beta Coefficients for:													
Grayness	+.37*	-.32*	-.26*	-.44*	-.28*	+.30*	+.07*	+.05*	+.14*	-.11*	-.75	-.13*	-.61
Yellowness	-.15*	+.09	+.03*	-.08*	-.02*	.00*	+.08*	+.11*	+.07*	-.02*	+.16*	-.06*	+.14*
Nonlint (S.A.)	+.34*	+.17*	+.06*	+.17*	+.16*	-.17*	-.13*	+.33*	+.41	-.03*	+.02*	+.22*	+.17*
2.5% span length	-.15*	+.83	+.87	+.34*	+.67	-.11*	-.01*	+.32*	+.22*	+.86	-.06*	+.25*	+.15*
Micronaire	-.12*	-.20*	-.19*	-.19*	-.25*	+.12*	+.26*	-.21*	-.20*	-.21*	-.14*	-.13*	+.11*
Regression Equation:													
Constant (a)	+9.09	+17.35	-24.37	+5.80	+1.34	+128.79	+79.98	-24.42	-9.35	-42.90	+106.58	+82.55	+80.31
Regression Coef. for:													
Grayness	+.32	-5.62	-1.85	-.20	-.13	+1.50	+.69	+.31	+.76	-.63	-3.11	-.43	-2.28
Yellowness	-.28	+3.18	+.49	-.07	-.02	-.04	+1.62	+1.59	+.85	-.29	+1.44	-.46	+1.07
Nonlint (S.A.)	+.36	+3.48	+.56	+.09	+.09	-1.01	-1.59	+2.70	+2.61	-.19	+.12	+.89	+.74
2.5% span length	-2.76	+315.44	+136.14	+3.42	+6.83	-11.59	-2.54	+47.74	+25.30	+105.27	-5.83	+18.97	+12.71
Micronaire	-.26	-8.89	-3.48	-.22	-.30	+1.48	+6.59	-3.70	-2.72	-2.99	-1.43	-1.14	+1.00
Standard Error (±)	.75	12.45	4.95	.42	.38	5.00	9.88	5.90	4.30	3.62	2.34	3.37	3.51

*Statistically insignificant

Table 14.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 70 short staple samples, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	6.3	291	91	7.7	6.5	124	108	20	16	42	93	96	98
2.5% span length	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96
Micronaire	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Fiber str. (1/8" gage)	21	21	21	21	21	21	21	21	21	21	21	21	21
Uniformity ratio	46	46	46	46	46	46	46	46	46	46	46	46	46
Elongation (1/8" gage)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Standard Deviation (±) for:													
Dependent variable	.91	18.4	7.6	.48	.49	5.2	10.4	7.3	5.7	5.9	4.4	3.6	4.0
2.5% span length	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
Micronaire	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
Fiber str. (1/8" gage)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Uniformity ratio	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Elongation (1/8" gage)	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64
Simple Correlation Coef. for:													
2.5% span length	+.15	+.58	+.67	+.13	+.48	+.03	+.02	+.35	+.33	+.75	-.53	+.23	-.14
Micronaire	-.11	-.21	-.12	-.27	-.25	+.22	+.30	-.25	-.25	-.06	-.38	-.16	-.09
Fiber str. (1/8" gage)	-.03	+.48	+.51	+.10	+.23	-.22	-.18	+.23	+.25	+.39	-.01	+.05	-.12
Uniformity ratio	+.06	.00	-.02	-.13	-.14	+.12	+.24	-.14	-.15	-.27	+.05	+.12	+.20
Elongation (1/8" gage)	-.13	-.12	-.17	+.52	+.47	-.16	-.04	-.01	-.04	+.16	.00	-.09	+.48
Multiple Cor. Data for:													
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.21	.67	.72	.32	.60	.22	.30	.48	.46	.78	.60	.31	.15
Partial Cor. Coef. for:													
2.5% span length	+.18	+.65	+.71	+.19	+.56	-.01	-.04	+.42	+.40	+.78	-.50	+.27	-.12
Micronaire	-.15	-.41	-.35	-.30	-.40	+.22	+.30	-.35	-.34	-.32	-.34	-.21	-.07
Beta Coefficients for:													
2.5% span length	+.18*	+.65	+.72	+.19*	+.55	-.01*	-.04*	+.41	+.40	+.79	-.47	+.27*	-.12*
Micronaire	-.15*	-.34	-.27	-.30*	-.36	+.22*	+.30*	-.33	-.33*	-.22	-.29	-.21*	-.07*
Regression Equation:													
Constant (a)	+4.37	+118.24	+2.99	+7.47	+2.95	+113.04	+82.49	-14.00	-9.29	-36.91	+147.26	+84.66	+110.39
Regression Coef. for:													
2.5% span length	+3.44	+248.22	+113.44	+1.87	+5.65	-1.28	-8.09	+62.28	+46.82	+96.41	-42.47	+20.44	-10.08
Micronaire	-.32	-14.99	-4.89	-.35	-.42	+2.79	+7.63	-5.87	-4.45	-3.10	-3.08	-1.84	-.66
Standard Error (±)	.89	13.59	5.26	.45	.40	5.12	9.97	6.39	5.01	3.71	3.50	3.43	3.91
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE FIBER STR. (1/8" GAGE)													
Multiple Cor. Coef.	.25	.71	.76	.33	.60	.29	.32	.48	.47	.78	.60	.32	.19
Partial Cor. Coef. for:													
2.5% span length	+.22	+.59	+.66	+.19	+.54	+.06	+.01	+.38	+.36	+.74	-.49	+.29	-.07
Micronaire	-.18	-.33	-.25	-.30	-.39	+.15	+.25	-.33	-.31	-.26	-.30	-.23	-.10
Fiber str. (1/8" gage)	-.14	+.29	+.36	-.04	-.04	-.19	-.11	+.03	+.06	+.17	+.09	-.10	-.11
Beta Coefficients for:													
2.5% span length	+.24*	+.56	+.62	+.20*	+.56	+.06*	+.01*	+.40	+.38	+.75	-.50	+.31*	-.08*
Micronaire	-.19*	-.26*	-.18*	-.32*	-.37	+.16*	+.27*	-.33*	-.31*	-.18*	-.27*	-.24*	-.11*
Fiber Str. (1/8" gage)	-.15*	+.24*	+.28	-.04*	-.03*	-.20*	-.12*	+.03*	+.06*	+.12*	-.08*	-.11*	-.12*
Regression Equation:													
Constant (a)	+6.06	+64.80	+22.39	+7.71	+3.15	+125.98	+97.19	-16.69	-13.17	-45.30	+143.01	+89.27	+116.14
Regression Coef. for:													
2.5% span length	+4.51	+214.44	+97.40	+2.02	+5.77	+6.91	+1.21	+60.59	+44.36	+91.11	-45.17	+23.35	-6.44
Micronaire	-.43	-11.70	-3.33	-.37	-.44	+1.99	+6.72	-5.70	-4.21	-2.58	-2.82	-2.12	-1.02
Fiber str. (1/8" gage)	-.11	+3.44	+1.63	-.02	-.01	-.83	-.95	+.17	+.25	+.54	+.27	-.30	-.37
Standard Error (±)	.89	12.99	4.91	.45	.40	5.03	9.91	6.39	5.00	3.65	3.49	3.42	3.88

*Statistically insignificant

Table 14.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE FIBER STR. (1/8" GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.30	.75	.79	.33	.60	.30	.36	.48	.47	.78	.60	.43	.28
Partial Cor. Coef. for:													
2.5% span length.....	+.25	+.65	+.71	+.19	+.55	+.08	+.05	+.38	+.36	+.72	-.48	+.35	-.02*
Micronaire.....	-.23	-.43	-.36	-.28	-.41	+.11	+.19	-.33	-.30	-.24	-.28	-.32	-.17*
Fiber str. (1/8" gage)...	-.16	+.27	+.35	-.04	-.05	-.20	-.13	+.02	+.05	+.17	+.09	-.14	-.14
Uniformity ratio.....	+.17	+.36	+.35	.00	+.13	+.10	+.19	+.06	+.03	-.04	-.01	+.29	+.22
Beta Coefficients for:													
2.5% span length.....	+.28*	+.66	+.71	+.20*	+.60	+.09*	+.06*	+.42	+.39	+.74	-.50	+.39	-.02*
Micronaire.....	-.26*	-.36	-.27	-.32*	-.41	+.12*	+.20*	-.34*	-.32*	-.17*	-.26*	-.35*	-.19*
Fiber str. (1/8" gage)...	-.17*	+.21*	+.25	-.04*	-.05*	-.22*	-.14*	+.02*	+.05*	+.12*	+.08*	-.14*	-.15*
Uniformity ratio.....	+.19*	+.28	+.25	.00*	+.11*	+.10*	+.20*	+.06*	+.03*	-.02*	-.01*	+.30*	+.23*
Regression Equation:													
Constant (a).....	-.17	-132.39	-95.99	+7.74	+1.07	+105.99	+21.72	-31.87	-20.14	-39.89	+144.95	+49.30	+81.94
Regression Coef. for:													
2.5% span length.....	+5.39	+252.15	+111.54	+2.02	+6.08	+9.85	+12.31	+62.95	+45.45	+90.18	-45.45	+28.94	-1.42
Micronaire.....	-.57	-15.87	-4.88	-.36	-.48	+1.55	+5.04	-6.04	-4.37	-2.47	-2.78	-3.02	-1.78
Fiber str. (1/8" gage).	-.12	+3.00	+1.47	-.02	-.02	-.88	-1.12	+.14	+.23	+.55	+.28	-.39	-.45
Uniformity ratio.....	+.14	+4.09	+1.52	.00	+.05	+.44	+1.65	+.33	+.15	-.11	-.04	+.88	+.75
Standard Error (±).....	.87	12.14	4.60	.45	.39	5.00	9.73	6.38	5.00	3.65	3.49	3.27	3.79
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE FIBER STR. (1/8" GAGE), UNIFORMITY RATIO,ELONGATION (1/8" GAGE)													
Multiple Cor. Coef.....	.35	.76	.81	.60	.75	.36	.37	.48	.47	.80	.60	.44	.55
Partial Cor. Coef. for:													
2.5% span length.....	+.28	+.66	+.72	+.14	+.58	+.11	+.06	+.39	+.36	+.72	-.48	+.37	-.09
Micronaire.....	-.25	-.44	-.39	-.28	-.43	+.10	+.18	-.33	-.31	-.23	-.27	-.33	-.14
Fiber str. (1/8" gage)...	-.20	+.24	+.30	+.10	+.09	-.24	-.14	+.02	+.04	+.22	+.10	-.17	-.03
Uniformity ratio.....	+.17	+.35	+.35	+.02	+.18	+.09	+.19	+.06	+.03	-.03	-.01	+.29	+.26
Elongation (1/8" gage)...	-.18	-.15	-.24	+.54	+.56	-.21	-.05	-.03	-.06	+.24	+.04	-.14	+.50
Beta Coefficients for:													
2.5% span length.....	+.31*	+.67	+.73	+.13*	+.53	+.12*	+.06*	+.42	+.39	+.72	-.50	+.40	-.08*
Micronaire.....	-.27*	-.37	-.28	-.26*	-.36	+.10*	+.20*	-.35*	-.33*	-.16*	-.26*	-.36*	-.14*
Fiber str. (1/8" gage)...	-.22*	+.19*	+.21*	+.09*	+.07*	-.27*	-.15*	+.02*	+.04*	+.16*	+.09*	-.17*	-.02*
Uniformity ratio.....	+.18*	+.27	+.24	+.02*	+.13*	+.10*	+.19*	+.05*	+.03*	-.02*	-.01*	+.30*	+.25*
Elongation (1/8" gage)...	-.18*	-.10*	-.15*	+.52	+.46	-.21*	-.05*	-.03*	-.05*	+.15*	+.03*	-.13*	+.49
Regression Equation:													
Constant (a).....	+2.12	-106.05	-80.15	+4.20	-2.13	+121.32	+29.44	-29.05	-15.83	-52.41	+143.05	+56.02	+54.51
Regression Coef. for:													
2.5% span length.....	+5.85	+257.24	+114.59	+1.32	+5.45	+12.90	+13.84	+63.51	+46.31	+87.73	-45.83	+30.28	-6.86
Micronaire.....	-.61	-16.30	-5.14	-.31	-.43	+1.29	+4.92	-6.08	-4.44	-2.26	-2.74	-3.13	-1.32
Fiber str. (1/8" gage).	-.16	+2.64	+1.25	+.03	+.03	-1.09	-1.23	+.10	+.17	+.72	+.30	-.48	-.07
Uniformity ratio.....	+.13	+4.04	+1.49	+.01	+.05	+.41	+1.63	+.32	+.14	-.09	-.04	+.87	+.80
Elongation (1/8" gage).	-.25	-2.88	-1.73	+.39	+.35	-1.68	-.85	-.31	-.47	+1.37	+.21	-.74	+3.01
Standard Error (±).....	.86	12.01	4.47	.38	.32	4.89	9.72	6.38	4.99	3.55	3.49	3.23	3.29

* Statistically insignificant

Table 15.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 346 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	5.7	104	33	6.4	4.6	104	80	20	15	61	93	98	99
Grade index	93	93	93	93	93	93	93	93	93	93	93	93	93
Staple length	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
Micronaire	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Fiber strength (0 gage)	84	84	84	84	84	84	84	84	84	84	84	84	84
Uniformity ratio	45	45	45	45	45	45	45	45	45	45	45	45	45
Standard Deviations (±) for:													
Dependent variable	1.05	11.3	5.9	.51	.43	12.6	9.9	7.4	5.5	8.9	4.7	2.6	4.7
Grade index	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Staple length	.92	.92	.92	.92	.92	.92	.92	.92	.92	.92	.92	.92	.92
Micronaire	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
Fiber strength (0 gage)	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Uniformity ratio	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Simple Correlation Coef. for:													
Grade index	-.51	+.30	+.25	+.01	+.16	+.16	+.15	-.34	-.35	+.09	+.70	+.15	+.18
Staple length	-.13	+.62	+.62	+.15	+.24	+.04	+.04	-.10	-.11	+.64	+.11	+.11	+.08
Micronaire	-.04	-.24	-.19	-.32	-.33	+.47	+.49	-.18	-.23	-.19	+.06	-.03	+.10
Fiber strength (0 gage)	-.16	+.63	+.54	-.36	-.19	+.02	+.05	-.13	-.15	+.35	+.34	-.26	-.07
Uniformity ratio	-.09	+.23	+.24	-.20	-.12	+.31	+.45	-.16	-.22	+.25	+.07	-.15	+.06
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.51	.65	.64	.15	.27	.16	.15	.35	.36	.64	.70	.17	.19
Partial Cor. Coef. for:													
Grade index	-.50	+.28	+.22	-.01	+.13	+.16	+.15	-.33	-.34	+.01	+.70	+.13	+.17
Staple length	-.08	+.61	+.61	+.15	+.22	+.02	+.02	-.05	-.07	+.64	+.03	+.09	+.06
Beta Coefficients for:													
Grade index	-.50	+.22	+.17	-.01*	+.13*	+.16	+.15*	-.34	-.35	+.01*	+.70	+.13*	+.17
Staple length	-.07*	+.59	+.60	+.15*	+.22	+.02*	+.02*	-.05*	-.06*	+.64	+.02*	+.09*	+.06*
Regression Equation:													
Constant (a)	+18.33	-190.68	-117.15	+3.61	+.02	+57.87	+46.25	+80.43	+64.08	-152.55	+26.10	+81.79	+72.64
Regression Coef. for:													
Grade index	-.11	+.50	+.21	.00	+.01	+.41	+.30	-.50	-.39	+.02	+.67	+.07	+.16
Staple length	-.08	+7.20	+3.81	+.08	+.10	+.23	+.17	-.41	-.38	+6.18	+.11	+.27	+.31
Standard Error (±)	.90	8.54	4.54	.51	.41	12.44	9.75	6.90	5.15	6.86	3.37	2.60	4.57
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.52	.69	.67	.35	.43	.49	.51	.38	.42	.66	.70	.18	.21
Partial Cor. Coef. for:													
Grade index	-.50	+.31	+.24	+.02	+.17	+.14	+.13	-.33	-.34	+.03	+.70	+.14	+.16
Staple length	-.08	+.62	+.61	+.14	+.22	+.04	+.05	-.06	-.08	+.64	+.03	+.09	+.07
Micronaire	-.02	-.30	-.23	-.32	-.34	+.47	+.49	-.17	-.22	-.21	+.02	-.03	+.09
Beta Coefficients for:													
Grade index	-.50	+.23	+.19	+.02*	+.15	+.13*	+.12*	-.32	-.33	+.02*	+.70	+.14*	+.16
Staple length	-.07*	+.58	+.59	+.13*	+.20	+.04*	+.04*	-.06*	-.07*	+.63	+.02*	+.09*	+.07*
Micronaire	-.01*	-.23	-.18	-.32	-.33	+.46	+.48	-.16	-.21	-.16	+.02*	-.03*	+.09*
Regression Equation:													
Constant (a)	+18.48	-163.83	-106.28	+5.30	+1.49	-2.63	-3.13	+92.50	+76.03	-137.52	+25.26	+82.61	+68.41
Regression Coef. for:													
Grade index	-.11	+.54	+.22	.00	+.01	+.33	+.24	-.49	-.37	+.04	+.67	+.07	+.16
Staple length	-.08	+.06	+3.76	+.07	+.09	+.54	+.43	-.47	-.44	+6.10	+.12	+.26	+.34
Micronaire	-.03	-5.75	-2.33	-.36	-.31	+12.95	+10.57	-2.58	-2.56	-3.22	+.18	-.18	+.91
Standard Error (±)	.90	8.14	4.42	.48	.39	10.99	8.51	6.80	5.02	6.71	3.37	2.60	4.56

*Statistically insignificant

Table 15.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.52	.80	.74	.58	.55	.49	.51	.38	.42	.68	.71	.42	.27
Partial Cor. Coef. for:													
Grade index.....	-.49	+.10	+.08	+.19	+.29	+.15	+.13	-.31	-.32	-.05	+.66	+.27	+.21
Staple length.....	-.09	+.58	+.57	+.30	+.33	+.06	+.05	-.06	-.08	+.60	-.01	+.21	+.11
Micronaire.....	-.02	-.36	-.25	-.36	-.37	+.47	+.49	-.17	-.22	-.22	+.02	-.03	+.09
Fiber str. (0 gage).....	+.06	+.56	+.44	-.49	-.38	-.06	-.01	+.01	.00	+.22	+.13	-.39	-.17
Beta Coefficients for:													
Grade index.....	-.52	+.06*	+.06*	+.17*	+.27	+.15*	+.12*	-.33	-.33	-.04*	+.66	+.28	+.22
Staple length.....	-.08*	+.45	+.49	+.27	+.31	+.05*	+.04*	-.06*	-.07*	+.58	-.01*	+.21	+.12*
Micronaire.....	-.01*	-.23	-.18	-.32	-.33	+.46	+.48	-.16	-.21	-.16	+.02*	-.03*	+.09*
Fiber str. (0 gage).....	+.05*	+.45	+.37	-.51	-.39	-.06*	-.01*	+.01*	.00*	+.19	+.10*	-.43	-.18
Regression Equation:													
Constant (a).....	+18.60	-148.03	-100.73	+4.83	+1.23	-4.12	-3.24	+92.64	+75.97	-133.78	+26.30	+80.21	+66.54
Regression Coef. for:													
Grade index.....	-.11	+.15	+.07	+.02	+.02	+.37	+.24	-.49	-.37	-.07	+.64	+.15	+.21
Staple length.....	-.09	+5.54	+3.12	+.15	+.14	+.75	+.45	-.49	-.43	+5.61	-.03	+.60	+.59
Micronaire.....	-.03	-5.73	-2.32	-.36	-.32	+12.95	+10.57	-2.58	-2.56	-3.21	+.18	-.18	+.90
Fiber str. (0 gage).....	+.01	+.87	+.37	-.04	-.03	-.12	-.01	+.01	.00	+.28	+.08	-.19	-.15
Standard Error (±).....	.90	6.73	3.97	.42	.36	10.98	8.51	6.80	5.02	6.54	3.34	2.40	4.49
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.52	.83	.77	.58	.56	.50	.57	.39	.43	.73	.71	.43	.27
Partial Cor. Coef. for:													
Grade index.....	-.50	+.15	+.12	+.20	+.30	+.17	+.16	-.32	-.33	-.01	+.66	+.26	+.22
Staple length.....	-.09	+.60	+.58	+.30	+.33	+.05	+.03	-.06	-.07	+.62	-.01	+.22	+.11
Micronaire.....	+.04	-.47	-.37	-.36	-.39	+.37	+.33	-.10	-.13	-.38	+.02	+.01	+.05
Fiber str. (0 gage).....	+.08	+.50	+.36	-.49	-.41	-.09	-.10	+.04	+.04	+.11	+.12	-.36	-.18
Uniformity ratio.....	-.10	+.34	+.31	+.10	+.15	+.13	+.30	-.09	-.13	+.37	.00	-.07	+.06
Beta Coefficients for:													
Grade index.....	-.53	+.09*	+.08*	+.18	+.28	+.16	+.15	-.34	-.34	-.01*	+.66	+.27	+.23
Staple length.....	-.08*	+.44	+.48	+.27	+.30	+.05*	+.03*	-.06*	-.07*	+.57	-.01*	+.21	+.11
Micronaire.....	+.04*	-.35	-.30	-.37	-.40	+.40	+.33	-.11*	-.14*	-.32	+.02*	+.01*	+.05*
Fiber str. (0 gage).....	+.08*	+.38	+.29	-.54	-.43	-.10*	-.10*	+.04*	+.04*	+.09*	+.10*	-.41	-.21
Uniformity ratio.....	-.10*	+.25	+.25	+.10*	+.15*	+.13*	+.31	-.10*	-.14*	+.33	.00*	-.07*	+.07*
Regression Equation:													
Constant (a).....	+20.92	-210.91	-133.57	+3.74	-.20	-41.56	-70.59	+109.15	+93.48	-199.23	+26.13	+84.60	+59.18
Regression Coef. for:													
Grade index.....	-.11	+.21	+.10	+.02	+.02	+.41	+.30	-.51	-.39	-.01	+.64	+.14	+.22
Staple length.....	-.09	+5.43	+3.06	+.15	+.14	+.68	+.32	-.46	-.40	+5.49	-.03	+.61	+.58
Micronaire.....	+.08	-8.76	-3.91	-.42	-.39	+11.12	+7.29	-1.78	-1.70	-6.40	+.17	+.03	+.55
Fiber str. (0 gage).....	+.01	+.73	+.29	-.05	-.03	-.20	-.16	+.05	+.04	+.13	+.08	-.18	-.16
Uniformity ratio.....	-.07	+1.90	+1.00	+.03	+.04	+1.15	+2.06	-.50	-.54	+2.00	+.01	-.13	+.23
Standard Error (±).....	.89	6.32	3.78	.42	.36	10.89	8.13	6.77	4.98	6.07	3.34	2.39	4.48

*Statistically insignificant

Table 16.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests on 346 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	5.7	104	33	6.4	4.6	104	80	20	15	61	93	98	99
Grayness	2	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness	3	3	3	3	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2.5% span length	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Micronaire	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Standard Deviation (±) for:													
Dependent variable	1.05	11.3	5.9	.51	.43	12.6	9.9	7.4	5.5	8.9	4.7	2.6	4.7
Grayness	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Yellowness	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
Nonlint content (S.A.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2.5% span length	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
Simple Correlation Coef. for													
Grayness	+.40	-.37	-.30	-.23	-.36	-.04	-.08	+.30	+.31	-.18	-.78	-.19	-.25
Yellowness	.00	-.15	-.10	-.39	-.31	+.06	+.11	+.10	+.10	-.21	+.12	-.15	.00
Nonlint content (S.A.)	+.56	-.17	-.18	+.12	+.04	-.26	-.22	+.32	+.33	-.12	-.42	-.11	-.08
2.5% span length	-.14	+.58	+.59	+.32	+.33	-.01	-.04	-.01	.00	+.67	+.06	+.25	+.16
Micronaire	-.04	-.24	-.19	-.32	-.33	+.47	+.49	-.18	-.23	-.19	+.06	-.03	+.10
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS													
Multiple Cor. Coef.	.41	.39	.31	.44	.46	.08	.15	.31	.32	.26	.81	.23	.25
Partial Cor. Coef. for:													
Grayness	+.41	-.36	-.30	-.21	-.35	-.05	-.10	+.30	+.30	-.16	-.81	-.18	-.25
Yellowness	-.05	-.12	-.07	-.38	-.29	+.07	+.12	+.07	+.07	-.20	+.32	-.13	+.02
Beta Coefficients for:													
Grayness	+.41	-.36	-.30	-.20	-.34	-.05*	-.10*	+.30	+.30	-.16*	-.80	-.18	-.25
Yellowness	-.04*	-.11*	-.07*	-.37	-.28	+.07*	+.12*	+.07*	+.07*	-.19	+.20	-.13*	+.02*
Regression Equation:													
Constant (a)	+5.03	+117.89	+38.98	+7.50	+5.45	+100.89	+76.57	+12.61	+9.68	+72.71	-95.95	+100.36	+100.45
Regression Coef. for													
Grayness	+.43	-4.10	-1.76	-.10	-.15	-.60	-.95	+2.20	+1.69	-1.44	-3.83	-.48	-1.17
Yellowness	-.08	-2.14	-.70	-.33	-.20	+1.44	+2.02	+.88	+.63	-2.98	+1.59	-.58	+.16
Standard Error (±)	.96	10.41	5.63	.46	.38	12.57	9.76	6.99	5.23	8.62	2.78	2.57	4.51
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.)													
Multiple Cor. Coef.	.60	.39	.32	.45	.47	.27	.22	.40	.41	.29	.81	.25	.25
Partial Cor. Coef. for:													
Grayness	+.18	-.30	-.22	-.25	-.38	+.09	.00	+.15	+.16	-.09	-.76	-.12	-.24
Yellowness	+.14	-.13	-.10	-.32	-.23	-.03	+.06	+.16	+.16	-.23	+.29	-.15	+.03
Nonlint (S.A.)	+.48	-.06	-.09	+.14	+.15	-.26	-.17	+.26	+.27	-.12	-.04	-.08	+.04
Beta Coefficients for:													
Grayness	+.17	-.33	-.25	-.27	-.41	+.09*	.00*	+.16*	+.16*	-.10*	-.79	-.14*	-.27
Yellowness	+.12*	-.13*	-.10*	-.33	-.23	-.03	+.06*	+.16*	+.16	-.24	+.19	-.16*	+.03*
Nonlint (S.A.)	+.52	-.06*	-.10*	+.15*	+.16*	-.31	-.20	+.29	+.30	-.14*	-.03*	-.09*	+.04*
Regression Equation:													
Constant (a)	+3.02	+120.55	+41.16	+7.22	+5.20	+115.20	+83.81	+4.69	+3.47	+77.28	+96.41	+101.25	+99.69
Regression Coef. for:													
Grayness	+.18	-3.77	-1.49	-.14	-.18	+1.20	-.04	+1.21	+.91	-.86	-3.77	-.37	-1.27
Yellowness	+.21	-2.52	-1.02	-.28	-.17	-.63	+.97	+2.02	+1.53	-3.64	+1.52	-.71	+.27
Nonlint (S.A.)	+.56	-.74	-.61	+.08	+.07	-3.98	-2.02	+2.20	+1.73	-1.27	-.13	-.25	+.21
Standard Error (±)	.84	10.40	5.61	.46	.38	12.14	9.62	6.75	5.04	8.55	2.78	2.56	4.51

*Statistically insignificant

Table 16.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH													
Multiple Cor. Coef.....	.60	.65	.64	.50	.52	.27	.22	.40	.42	.68	.81	.31	.29
Partial Cor. Coef. for:													
Grayness.....	+.17	-.30	-.22	-.22	-.34	+.08	-.01	+.16	+.16	-.07	-.76	-.10	-.22
Yellowness.....	+.11	+.03	+.08	-.26	-.16	-.03	+.04	+.18	+.18	-.06	+.28	-.09	+.07
Nonlint (S.A.).....	+.47	-.02	-.06	+.16	+.17	-.26	-.17	+.26	+.28	-.10	-.04	-.07	+.05
2.5% span length.....	-.09	+.57	+.58	+.23	+.26	-.01	-.03	+.08	+.08	+.65	+.01	+.20	+.15
Beta Coefficients for:													
Grayness.....	+.16	-.28	-.20	-.23	-.36	+.09*	-.01*	+.17	+.18	-.06*	-.79	-.12*	-.25
Yellowness.....	+.10*	+.03*	+.07*	-.26	-.16	-.03*	+.05*	+.18	+.18	-.05*	+.19	-.10*	+.08*
Nonlint (S.A.).....	+.51	-.02*	-.05*	+.16*	+.17	-.31	-.20	+.30	+.31	-.09*	-.03*	-.07*	+.06*
2.5% span length.....	-.08*	+.55	+.58	+.22	+.24	-.01*	-.03*	+.07*	+.08*	+.65	+.01*	+.20	+.15*
Regression Equation:													
Constant (a).....	+5.52	-75.04	-67.13	+3.66	+1.97	+121.07	+94.67	-12.32	-10.11	-105.17	+95.39	+84.49	+77.24
Regression Coef. for:													
Grayness.....	+.17	-3.13	-1.20	-.12	-.16	+1.18	-.09	+1.28	+.98	-.53	-3.76	-.31	-1.17
Yellowness.....	+.17	+.53	+.67	-.23	-.12	-.72	+.80	+2.29	+1.74	-.78	+1.54	-.45	+.62
Nonlint (S.A.).....	+.55	-.24	-.33	+.09	+.08	-4.00	-2.04	+2.25	+1.76	-.80	-.13	-.20	+.27
2.5% span length.....	-2.16	+168.84	+93.59	+3.06	+2.78	-5.06	-9.35	+14.64	+11.68	+157.97	+.88	+14.45	+19.33
Standard Error (±).....	.84	8.55	4.55	.44	.37	12.14	9.61	6.73	5.02	6.53	2.78	2.51	4.46
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.60	.70	.68	.53	.56	.51	.52	.45	.49	.71	.82	.31	.32
Partial Cor. Coef. for:													
Grayness.....	+.16	-.24	-.16	-.17	-.29	-.03	-.14	+.23	+.24	.00	-.77	-.10	-.25
Yellowness.....	+.10	+.11	+.15	-.21	-.11	-.15	-.08	+.23	+.25	+.01	+.23	-.09	+.04
Nonlint (S.A.).....	+.47	-.10	-.13	+.10	+.11	-.16	-.06	+.21	+.21	-.17	+.01	-.06	+.08
2.5% span length.....	-.09	+.61	+.62	+.26	+.29	-.07	-.10	+.10	+.12	+.67	-.01	+.20	+.14
Micronaire.....	+.03	-.32	-.29	-.22	-.24	+.45	+.49	-.22	-.29	-.29	+.20	.00	+.14
Beta Coefficients for:													
Grayness.....	+.16	-.21	-.14*	-.17	-.30	-.03*	-.15*	+.23	+.25	.00*	-.83	-.12*	-.29
Yellowness.....	+.09*	+.09*	+.13*	-.21	-.10*	-.15*	-.08*	+.24	+.26	+.01*	+.16	-.10*	+.04*
Nonlint (S.A.).....	+.52	-.09*	-.12*	+.11*	+.11*	-.18	-.06*	+.23	+.23	-.15	+.01*	-.07*	+.10*
2.5% span length.....	-.08*	+.58	+.61	+.24	+.26	-.07*	-.09*	+.10*	+.11*	+.67	-.01*	+.20	+.14*
Micronaire.....	+.03*	-.26	-.24	-.21	-.22	+.48	+.52	-.23	-.29	-.23	+.13	+.01*	+.15*
Regression Equation:													
Constant (a).....	+5.34	-57.70	-58.72	+4.27	+2.53	+85.71	+64.68	-2.42	-.78	-93.00	+91.78	+84.41	+73.30
Regression Coef. for:													
Grayness.....	+.16	-2.36	-.83	-.09	-.13	-.42	-1.44	+1.73	+1.40	.00	-3.93	-.31	-1.34
Yellowness.....	+.16	+1.78	+1.28	-.19	-.08	-3.28	-1.37	+3.00	+2.42	+.10	+1.27	-.46	+.34
Nonlint (S.A.).....	+.56	-1.08	-.73	+.06	+.05	-2.28	-.59	+1.77	+1.31	-1.39	+.05	-.20	+.46
2.5% span length.....	-2.25	+177.36	+97.72	+3.36	+3.05	-22.45	-24.10	+19.51	+16.27	+163.94	-.89	+14.41	+17.39
Micronaire.....	+.07	-6.60	-3.20	-.23	-.21	+13.46	+11.42	-3.77	-3.55	-4.62	+1.37	+.03	+1.50
Standard Error (±).....	.84	8.12	4.36	.43	.36	10.82	8.40	6.55	4.81	6.25	2.72	2.51	4.41

*Statistically insignificant

Table 17.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurement with processing tests performed on 346 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable.....	5.7	104	33	6.4	4.6	104	80	20	15	61	93	98	99
2.5% span length.....	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Micronaire.....	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Fiber str. (1/8" gage).....	22	22	22	22	22	22	22	22	22	22	22	22	22
Uniformity ratio.....	45	45	45	45	45	45	45	45	45	45	45	45	45
Elongation (1/8" gage).....	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Standard Deviation (±) for													
Dependent variable.....	1.05	11.3	5.9	.51	.43	12.6	9.9	7.4	5.5	8.9	4.7	2.6	4.7
2.5% span length.....	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire.....	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
Fiber str. (1/8" gage).....	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Uniformity ratio.....	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Elongation (1/8" gage).....	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84
Simple Correlation Coef. for:													
2.5% span length.....	-.14	+.58	+.59	+.32	+.33	-.01	-.04	-.01	.00	+.67	+.06	+.25	+.16
Micronaire.....	-.04	-.24	-.19	-.32	-.33	+.47	+.49	-.18	-.23	-.19	+.06	-.03	+.10
Fiber str. (1/8" gage).....	-.12	+.79	+.73	-.11	+.09	.00	+.04	-.07	-.10	+.55	+.35	-.10	+.01
Uniformity ratio.....	-.09	+.23	+.24	-.20	-.12	+.31	+.45	-.16	-.22	+.25	+.07	-.15	+.06
Elongation (1/8" gage).....	-.08	-.24	-.21	+.67	+.53	+.03	+.02	-.02	-.01	-.08	-.07	+.30	+.25
Multiple Cor. Data for:													
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE													
Multiple Cor. Coef.....	.14	.63	.62	.46	.47	.47	.49	.18	.23	.70	.08	.25	.19
Partial Cor. Coef. for:													
2.5% span length.....	-.14	+.60	+.60	+.34	+.35	-.02	-.05	.00	.00	+.69	+.06	+.25	+.16
Micronaire.....	-.04	-.30	-.24	-.35	-.35	+.47	+.49	-.18	-.23	-.26	+.06	-.03	+.09
Beta Coefficients for:													
2.5% span length.....	-.14*	+.58	+.59	+.32	+.33	-.02*	-.05*	.00*	.00*	+.67	+.06*	+.25	+.16
Micronaire.....	-.04*	-.25	-.20	-.33	-.33	+.47	+.49	-.18	-.23	-.20	+.06*	-.03*	+.09*
Regression Equation:													
Constant (a).....	+10.40	-64.93	-59.56	+3.11	+1.77	+51.13	+46.88	+33.30	+27.32	-100.69	+81.97	+79.09	+71.91
Regression Coef. for:													
2.5% span length.....	-3.94	+179.38	+95.71	+4.50	+3.87	-5.02	-12.76	-.97	-.14	+164.29	+7.27	+17.78	+20.49
Micronaire.....	-.09	-6.16	-2.59	-.37	-.32	+13.13	+10.70	-2.87	-2.77	-3.87	+.61	-.17	+.96
Standard Error (±).....	1.04	8.78	4.63	.46	.38	11.13	8.59	7.24	5.38	6.38	4.71	2.56	4.58
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE FIBER STR. (1/8" GAGE)													
Multiple Cor. Coef.....	.16	.88	.83	.52	.47	.47	.50	.19	.25	.77	.37	.33	.20
Partial Cor. Coef. for:													
2.5% span length.....	-.10	+.54	+.52	+.42	+.34	-.02	-.08	+.02	+.04	+.62	-.09	+.31	+.17
Micronaire.....	-.04	-.44	-.31	-.36	-.35	+.47	+.49	-.18	-.23	-.28	+.07	-.04	+.09
Fiber str. (1/8" gage)...	-.07	+.79	+.69	-.28	-.01*	+.01	+.08	-.08	-.11	+.45	+.36	-.22	-.06
Beta Coefficients for:													
2.5% span length.....	-.11*	+.33	+.37	+.43	+.35	-.02	-.08*	+.03*	+.04*	+.54	-.09*	+.33	+.18
Micronaire.....	-.04*	-.23	-.19	-.33	-.33	+.47	+.49	-.18*	-.23	-.19	+.07*	-.03*	+.09*
Fiber str. (1/8" gage)...	-.08*	+.66	+.59	-.27	-.05*	+.01	+.07*	-.08*	-.12*	+.35	+.39	-.23	-.06*
Regression Equation:													
Constant (a).....	+10.48	-72.89	-63.25	+3.26	+1.79	+51.01	+46.10	+33.94	+28.00	-103.97	+80.01	+79.74	+72.20
Regression Coef. for:													
2.5% span length.....	-3.09	+102.05	+59.86	+5.95	+4.08	-6.17	-20.30	+5.20	+6.46	+132.39	-11.71	+24.08	+23.32
Micronaire.....	-.10	-5.85	-2.45	-.38	-.32	+13.13	+10.73	-2.89	-2.80	-3.74	+.68	-.19	+.95
Fiber str. (1/8" gage).	-.04	+4.05	+1.88	-.08	-.01	+.06	+.39	-.32	-.35	+1.67	+.99	-.33	-.15
Standard Error (±).....	1.04	5.39	3.34	.44	.38	11.13	8.56	7.22	5.34	5.70	4.39	2.50	4.57

*Statistically insignificant

Table 17.--Continued

Statistical Items	Dependent Variables											
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.17	.90	.84	.52	.47	.48	.55	.20	.27	.82	.38	.34	.20
Partial Cor. Coef. for:													
2.5% span length.....	-.09	+.58	+.56	+.40	+.33	-.04	-.13	+.04	+.06	+.67	-.07	+.33	+.16
Micronaire.....	-.01	-.55	-.43	-.33	-.33	+.37	+.34	-.12	-.15	-.46	+.10	+.03	+.07
Fiber str. (1/8" gage)....	-.05	+.76	+.65	-.28	-.06	-.03	-.02	-.05	-.07	+.35	+.37	-.17	-.06
Uniformity ratio.....	-.05	+.37	+.32	+.02	+.05	+.11	+.28	-.07	-.10	+.42	-.09	-.12	+.03
Beta Coefficients for:													
2.5% span length.....	-.10*	+.34	+.39	+.42	+.34	-.04*	-.12*	+.04*	+.06*	+.57	-.07*	+.36	+.18
Micronaire.....	-.01*	-.34	-.29	-.35	-.36	+.41	+.35	-.14*	-.17*	-.35	+.11*	+.03*	+.08*
Fiber str. (1/8" gage)....	-.06*	+.60	+.52	-.28	-.06*	-.03*	-.02*	-.06*	-.08*	+.25	+.42	-.19	-.07*
Uniformity ratio.....	-.07*	+.22	+.22	+.03*	+.05*	+.12*	+.29	-.08*	-.12*	+.33	-.10*	-.13*	+.03*
Regression Equation:													
Constant (a).....	+11.69	-129.26	-94.59	+3.05	+1.42	+24.27	-4.62	+44.72	+39.63	-175.00	+87.83	+85.66	+69.44
Regression Coef. for:													
2.5% span length.....	-2.81	+104.12	+62.64	+5.87	+3.97	-12.92	-31.93	+7.85	+9.24	+138.35	-9.57	+25.73	+22.59
Micronaire.....	-.02	-8.49	-3.83	-.39	-.34	+11.47	+7.65	-2.23	-2.08	-6.89	+1.18	+.18	+.78
Fiber str. (1/8" gage)..	-.03	+3.64	+1.66	-.08	-.01	-.20	-.08	-.22	-.24	+1.18	+1.07	-.27	-.18
Uniformity ratio.....	-.05	+1.66	+.87	+.01	+.01	+1.04	+1.94	-.42	-.45	+1.97	-.31	-.24	+.11
Standard Error (±).....	1.04	5.00	3.17	.44	.38	11.06	8.23	7.20	5.32	5.17	4.38	2.48	4.57
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO, ELONGATION (1/8" GAGE)													
Multiple Cor. Coef.....	.21	.90	.84	.77	.70	.50	.58	.23	.30	.82	.40	.39	.33
Partial Cor. Coef. for:													
2.5% span length.....	-.04	+.55	+.53	+.22	+.14	-.09	-.20	+.07	+.10	+.64	-.12	+.25	+.06
Micronaire.....	-.02	-.55	-.42	-.38	-.36	+.38	+.36	-.13	-.16	-.46	+.11	+.04	+.09
Fiber str. (1/8" gage)....	-.11	+.72	+.60	+.09	+.28	+.05	+.09	-.09	-.13	+.33	+.39	-.07	+.08
Uniformity ratio.....	-.07	+.37	+.32	+.16	+.16	+.14	+.31	-.09	-.12	+.42	-.07	-.09	+.07
Elongation (1/8" gage)....	-.13	+.01	+.01	+.67	+.59	+.15	+.21	-.11	-.13	+.04	+.14	+.19	+.27
Beta Coefficients for:													
2.5% span length.....	-.04*	+.34	+.39	+.17	+.11*	-.09*	-.19	+.08*	+.12*	+.56	-.13*	+.28	+.06*
Micronaire.....	-.02*	-.34	-.29	-.30	-.32	+.42	+.36	-.14	-.18*	-.35	+.12*	+.04*	+.09*
Fiber Str. (1/8" gage)....	-.14*	+.60	+.52	+.07*	+.26	+.05*	+.10*	-.12*	-.16*	+.26	+.50	-.08*	+.10*
Uniformity ratio.....	-.09*	+.22	+.22	+.13	+.14	+.15*	+.32	-.10*	-.14*	+.33	-.07*	-.10*	+.08*
Elongation (1/8" gage)....	-.16*	+.00*	+.01*	+.69	+.63	+.16*	+.21	-.12*	-.16*	+.03*	+.16*	+.21	+.32
Regression Equation:													
Constant (a).....	+13.19	-129.58	-95.16	-.01	-1.02	+6.26	-23.82	+52.98	+47.44	-177.43	+81.00	+80.62	+55.85
Regression Coef. for:													
2.5% span length.....	-1.22	+103.83	+62.15	+2.41	+1.35	-32.08	-52.14	+16.61	+17.49	+136.26	-16.91	+20.30	+8.04
Micronaire.....	-.04	-8.48	-3.82	-.35	-.31	+11.73	+7.92	-2.34	-2.19	-6.85	+1.28	+.26	+.97
Fiber str. (1/8" gage)..	-.08	+3.65	+1.68	+.02	+.06	+.36	+.51	-.48	-.48	+1.25	+1.28	-.11	+.25
Uniformity ratio.....	-.06	+1.66	+.87	+.04	+.04	+1.24	+2.15	-.51	-.53	+2.00	-.23	-.18	+.26
Elongation (1/8" gage)..	-.20	+.04	+.07	+.42	+.32	+2.37	+2.51	-1.09	-1.02	+.29	+.90	+.67	+1.80
Standard Error (±).....	1.03	5.00	3.17	.33	.31	10.93	8.04	7.16	5.27	5.17	4.33	2.44	4.39

*Statistically insignificant

Table 18.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 40 long staple samples, carded yarns, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable.....	8.3	115	38	6.4	4.8	108	86	17	13	74	94	99	98
Grade index.....	92	92	92	92	92	92	92	92	92	92	92	92	92
Staple length.....	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2
Micronaire.....	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Fiber strength (0 gage)....	86	86	86	86	86	86	86	86	86	86	86	86	86
Uniformity ratio.....	45	45	45	45	45	45	45	45	45	45	45	45	45
Standard Deviation (±) for													
Dependent variable.....	1.05	16.0	7.6	.32	.32	15.7	11.1	6.2	4.5	14.4	4.6	2.4	4.3
Grade index.....	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Staple length.....	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Micronaire.....	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61
Fiber strength (0 gage)....	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Uniformity ratio.....	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Simple Correlation Coef. for:													
Grade index.....	-.72	+.63	+.58	+.11	+.02	-.41	-.36	+.06	+.09	+.53	+.75	+.01	+.27
Staple length.....	-.29	+.88	+.89	+.35	+.54	-.47	-.33	+.26	+.32	+.79	+.47	+.15	-.10
Micronaire.....	+.09	-.60	-.62	-.51	-.48	+.87	+.80	-.49	-.55	-.54	-.58	-.41	-.23
Fiber strength (0 gage)....	-.57	+.84	+.82	+.23	+.30	-.46	-.38	+.25	+.26	+.71	+.51	+.02	-.03
Uniformity ratio.....	-.09	+.12	+.12	+.05	+.18	+.38	+.42	-.34	-.34	+.19	.00	-.08	-.04
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.....	.73	.91	.91	.35	.60	.52	.40	.27	.33	.81	.76	.17	.37
Partial Cor. Coef. for:													
Grade index.....	-.70	+.48	+.37	-.07	-.33	-.24	-.24	-.08	-.08	+.28	+.68	-.08	+.36
Staple length.....	+.10	+.84	+.86	+.34	+.60	-.34	-.19	+.26	+.32	+.72	+.18	+.17	-.27
Beta Coefficients for:													
Grade index.....	-.76	+.26	+.19*	-.08*	-.32*	-.24*	-.26*	-.09*	-.09*	+.20*	+.69	-.09*	+.41*
Staple length.....	+.08*	+.75	+.80	+.39*	+.69	-.35*	-.20*	+.30*	+.36*	+.70	+.14*	+.19*	-.30*
Regression Equation:													
Constant (a).....	+18.19	-322.25	-172.79	+2.98	-.49	+339.93	+200.22	-31.94	-31.80	-283.53	+25.53	+87.68	+109.72
Regression Coef. for:													
Grade index.....	-.13	+.71	+.24	.00	-.02	-.64	-.49	-.09	-.07	+.48	+.53	-.03	+.30
Staple length.....	+.07	+10.57	+5.37	+.11	+.19	-4.92	-1.97	+1.62	+1.44	+8.90	+.55	+.40	-1.13
Standard Error (±).....	.72	6.79	3.19	.30	.25	13.47	10.14	5.94	4.26	8.46	2.94	2.32	4.00
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH MICRONAIRE													
Multiple Cor. Coef.....	.81	.91	.91	.57	.70	.88	.81	.55	.61	.81	.78	.49	.43
Partial Cor. Coef. for:													
Grade index.....	-.79	+.41	+.26	-.28	-.49	+.16	+.10	-.29	-.32	+.21	+.62	-.27	+.27
Staple length.....	-.12	+.81	+.83	+.18	+.52	-.06	+.16	+.08	+.13	+.68	+.08	-.01	-.33
Micronaire.....	-.52	-.17	-.27	-.48	-.45	+.83	+.77	-.50	-.54	-.15	-.26	-.46	-.23
Beta Coefficients for:													
Grade index.....	-.93	+.23*	+.14*	-.29*	-.49	+.10*	+.07*	-.32*	-.33*	+.16*	+.61	-.30*	+.31*
Staple length.....	-.09*	+.72	+.75	+.18*	+.53	-.03*	+.12*	+.08*	+.13*	+.66	+.06*	-.01*	-.39*
Micronaire.....	-.46	-.09*	-.14*	-.57	-.46	+.91	+.90	-.62	-.66	-.11*	-.21*	-.59	-.28*
Regression Equation:													
Constant (a).....	+29.50	-287.56	-147.16	+7.26	+2.95	+3.39	-34.72	+57.98	+38.03	-246.42	+48.38	+120.17	+137.74
Regression Coef. for:													
Grade index.....	-.16	+.62	+.17	-.02	-.03	+.26	+.13	-.33	-.25	+.38	+.47	-.12	+.23
Staple length.....	-.08	+10.11	+5.03	+.05	+.15	-.48	+1.13	+.44	+.52	+8.41	+.25	-.02	-1.50
Micronaire.....	-.79	-2.43	-1.80	-.30	-.24	23.58	+16.46	-6.30	-4.89	-2.60	-1.60	-2.28	-1.96
Standard Error (±).....	.62	6.69	3.08	.26	.22	7.55	6.49	5.14	3.57	8.37	2.84	2.05	3.90

*Statistically insignificant

Table 18.--Continued

Statistical Items	Dependent Variables											
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.83	.94	.94	.58	.71	.90	.84	.59	.63	.83	.78	.49	.44
Partial Cor. Coef. for:													
Grade index.....	-.69	+.23	+.07	-.29	-.48	+.27	+.21	-.36	-.37	+.10	+.58	-.23	+.29
Staple length.....	+.11	+.68	+.72	+.10	+.40	+.19	+.34	-.09	-.02	+.51	+.08	+.02	-.21
Micronaire.....	-.51	-.28	-.37	-.49	-.46	+.85	+.80	-.53	-.56	-.18	-.25	-.46	-.22
Fiber str. (0 gage).....	-.32	+.56	+.53	+.08	+.09	-.38	-.35	+.25	+.20	+.26	-.02	-.05	-.11
Beta Coefficients for:													
Grade index.....	-.78	+.11*	+.03*	-.32*	-.51	+.16*	+.15*	-.40*	-.40*	+.07*	+.62	-.28*	+.37*
Staple length.....	+.09*	+.49	+.55	+.12*	+.47*	+.14*	+.31*	-.12*	-.02*	+.52	+.08*	+.03*	-.30*
Micronaire.....	-.43	-.13*	-.18*	-.59	-.47	+.94	+.93	-.65	-.68	-.13*	-.21*	-.58	-.26*
Fiber str. (0 gage).....	-.31*	+.39	+.35	+.10*	+.10*	-.30*	-.34*	+.35*	+.27*	+.25*	-.02*	-.07*	-.16*
Regression Equation:													
Constant (a).....	+25.79	-234.22	-124.79	+7.54	+3.20	-29.62	-62.93	+73.93	+47.16	-214.38	+47.38	+118.59	+131.06
Regression Coef. for:													
Grade index.....	-.14	+.30	+.04	-.02	-.03	+.42	+.28	-.41	-.30	+.18	+.47	-.11	+.27
Staple length.....	+.08	+6.98	+3.67	+.03	+.13	+1.89	+3.02	-.64	-.09	+6.58	+.30	+.06	-1.14
Micronaire.....	-.74	-3.46	-2.24	-.31	-.25	+24.36	+17.09	-6.66	-5.09	-3.21	-1.58	-2.25	-1.85
Fiber str. (0 gage).....	-.06	+1.06	+.46	+.01	+.01	-.80	-.64	+.37	+.21	+.62	-.02	-.03	-.12
Standard Error (±).....	.58	5.53	2.61	.26	.22	6.99	6.08	4.97	3.50	8.07	2.84	2.05	3.87
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.83	.95	.95	.68	.81	.90	.84	.60	.64	.86	.80	.54	.49
Partial Cor. Coef. for:													
Grade index.....	-.69	+.19	+.01	-.37	-.60	+.28	+.21	-.34	-.35	+.04	+.57	-.27	+.26
Staple length.....	+.04	+.58	+.63	-.11	+.17	+.23	+.33	-.03	+.03	+.36	-.05	-.10	-.29
Micronaire.....	-.48	-.45	-.54	-.62	-.67	+.81	+.72	-.38	-.42	-.41	-.37	-.50	-.31
Fiber str. (0 gage).....	-.31	+.61	+.59	+.13	+.16	-.39	-.35	+.24	+.20	+.33	+.01	-.03	-.09
Uniformity ratio.....	+.13	+.38	+.43	+.44	+.55	-.13	-.05	-.12	-.11	+.42	+.28	+.26	+.23
Beta Coefficients for:													
Grade index.....	-.79	+.08*	.00*	-.40*	-.59	+.17*	+.16*	-.38*	-.38*	+.03*	+.58	-.33*	+.33*
Staple length.....	+.04*	+.39	+.44	-.15*	+.18*	+.18*	+.33*	-.05*	+.04*	+.34*	-.06*	-.14*	-.45*
Micronaire.....	-.50	-.27*	-.34	-.97	-.88	+1.00	+.96	-.55*	-.60*	-.38*	-.40*	-.82	-.47*
Fiber str. (0 gage).....	-.30*	+.41	+.38	+.16*	+.16*	-.31*	-.34*	+.33*	+.25*	+.29*	+.01*	-.04*	-.13*
Uniformity ratio.....	+.09*	+.18*	+.20*	+.48*	+.51	-.08*	-.04*	-.13*	-.11*	+.31*	+.23*	+.30*	+.27*
Regression Equation:													
Constant (a).....	+24.67	-266.89	-142.14	+5.79	+1.31	-15.24	-58.24	+83.21	+53.02	-266.24	+35.26	+110.41	+117.78
Regression Coef. for:													
Grade index.....	-.14	+.23	.00	-.02	-.03	+.45	+.29	-.39	-.29	+.07	+.44	-.13	+.24
Staple length.....	+.03	+5.57	+2.92	-.04	+.05	+2.50	+3.22	-.25	+.16	+4.34	-.23	-.29	-1.72
Micronaire.....	-.87	-7.18	-4.21	-.50	-.46	+25.97	+17.62	-5.61	-4.43	-9.12	-2.98	-3.18	-3.37
Fiber str. (0 gage).....	-.05	+1.12	+.49	+.01	+.01	-.83	-.65	+.35	+.20	+.71	+.00	-.01	-.10
Uniformity ratio.....	+.08	+2.23	+1.18	+.12	+.13	-.96	-.32	-.63	-.40	+3.54	+.84	+.56	+.91
Standard Error (±).....	.58	5.11	2.36	.23	.19	6.93	6.07	4.93	3.48	7.33	2.72	1.98	3.77

*Statistically insignificant

Table 19.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 40 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	8.3	115	38	6.4	4.8	108	86	17	13	74	94	99	98
Grayness	2	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness	3	3	3	3	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
2.5% span length	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Micronaire	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Standard Deviation (±) for:													
Dependent variable	1.05	16.0	7.6	.32	.32	15.7	11.1	6.2	4.5	14.4	4.6	2.4	4.3
Grayness	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Yellowness	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
Nonlint content (S.A.)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
2.5% span length	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61
Simple Correlation Coef. for:													
Grayness	+.55	-.72	-.70	-.32	-.31	+.54	+.41	-.20	-.27	-.61	-.89	-.25	-.17
Yellowness	-.48	+.02	-.02	-.29	-.11	+.28	+.29	-.34	-.30	+.03	+.06	-.39	-.04
Nonlint content (S.A.)	+.73	-.42	-.37	-.01	+.11	+.10	+.07	+.19	+.16	-.36	-.69	+.15	-.23
2.5% span length	-.14	+.60	+.61	+.26	+.38	-.32	-.32	+.25	+.38	+.60	+.01	+.16	-.14
Micronaire	+.09	-.60	-.62	-.51	-.48	+.87	+.80	-.49	-.55	-.54	-.58	-.41	-.23
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS													
Multiple Cor. Coef.	.76	.72	.70	.41	.32	.59	.49	.38	.39	.61	.90	.45	.17
Partial Cor. Coef. for:													
Grayness	+.67	-.72	-.70	-.31	-.30	+.54	+.41	-.19	-.26	-.61	-.90	-.24	-.17
Yellowness	-.62	+.11	+.04	-.28	-.09	+.29	+.28	-.33	-.29	+.09	+.27	-.38	-.02
Beta Coefficients for:													
Grayness	+.59*	-.72	-.70	-.30*	-.30*	+.52	+.40*	-.18*	-.25*	-.61	-.90	-.22*	-.17*
Yellowness	-.52	+.07*	+.03*	-.27*	-.09*	+.25*	+.26*	-.33*	-.28*	+.07*	+.12*	-.37*	-.02*
Regression Equation:													
Constant (a)	+9.97	+128.06	+45.81	+6.95	+5.04	+75.63	+64.49	+28.64	+20.83	+82.89	+97.55	+103.90	+99.31
Regression Coef. for:													
Grayness	+.51	-9.54	-4.41	-.08	-.08	+6.77	+3.62	-.91	-.93	-7.33	-3.39	-.43	-.60
Yellowness	-.93	+1.99	+.37	-.14	-.05	+6.55	+4.86	-3.42	-2.13	+1.79	+.93	-1.48	-.17
Standard Error (±)	.69	11.08	5.39	.29	.30	12.69	9.66	5.69	4.16	11.40	1.98	2.10	4.26
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.)													
Multiple Cor. Coef.	.83	.73	.73	.44	.60	.67	.52	.47	.53	.62	.90	.55	.19
Partial Cor. Coef. for:													
Grayness	+.31	-.67	-.68	-.33	-.58	+.63	+.44	-.33	-.46	-.55	-.81	-.42	-.06
Yellowness	-.42	+.20	+.18	-.16	+.25	+.04	+.13	-.15	-.05	+.16	+.16	-.16	-.07
Nonlint (S.A.)	+.51	+.20	+.26	+.16	+.54	-.40	-.22	+.29	+.40	+.15	-.14	+.36	-.09
Beta Coefficients for:													
Grayness	+.26*	-.86	-.89	-.44*	-.80	+.83	+.58*	-.44*	-.61*	-.73	-.84	-.53*	-.08*
Yellowness	-.31*	+.16*	+.15*	-.18*	+.24*	+.04*	+.14*	-.16*	-.05*	+.15*	+.08*	-.17*	-.08*
Nonlint (S.A.)	+.50	+.21*	+.28*	+.22*	+.78	-.49*	-.29*	+.40*	+.55*	+.18*	-.09*	+.49*	-.14*
Regression Equation:													
Constant (a)	+7.99	+115.47	+37.82	+6.69	+4.12	+104.45	+76.68	+19.29	+11.49	+73.27	+99.17	+99.59	+101.58
Regression Coef. for:													
Grayness	+.23	-11.33	-5.55	-.11	-.21	+10.86	+5.35	-2.23	-2.26	-8.70	-3.16	-1.04	-.28
Yellowness	-.55	+4.39	+1.90	-.09	+.13	+1.05	+2.53	-1.64	-.35	+3.63	+.62	-.66	-.61
Nonlint (S.A.)	+.41	+2.58	+1.64	+.05	+.19	-5.92	-2.50	+1.92	+1.92	+1.98	-.33	+.88	-.47
Standard Error (±)	.59	10.85	5.21	.28	.25	11.63	9.42	5.45	3.82	11.27	1.96	1.96	4.24

*Statistically insignificant

Table 19.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH													
Multiple Cor. Coef.....	.84	.86	.85	.46	.64	.68	.55	.48	.58	.79	.91	.55	.26
Partial Cor. Coef. for:													
Grayness.....	+.33	-.74	-.72	-.33	-.57	+.63	+.45	-.33	-.44	-.62	-.84	-.42	-.06
Yellowness.....	-.43	+.23	+.20	-.17	+.25	+.05	+.14	-.15	-.06	+.17	+.18	-.16	-.06
Nonlint (S.A.).....	+.56	+.05	+.14	+.12	+.51	-.36	-.17	+.26	+.34	-.01	-.06	+.35	-.05
2.5% span length.....	-.29	+.67	+.65	+.16	+.25	-.15	-.20	+.13	+.27	+.62	-.35	-.01	-.17
Beta Coefficients for:													
Grayness.....	+.26*	-.77	-.76	-.44*	-.75	+.83	+.58*	-.44*	-.57*	-.67	-.87	-.53*	-.08*
Yellowness.....	-.30*	+.14*	+.13*	-.18*	+.23*	+.04*	+.14*	-.16*	-.06*	+.13*	+.09*	-.17*	-.07*
Nonlint (S.A.).....	+.56	+.04*	+.11*	+.16*	+.70	-.44*	-.23*	+.36*	+.46*	-.01*	-.04*	+.49*	-.08*
2.5% span length.....	-.18*	+.48	+.48*	+.15*	+.21*	-.12*	-.18*	+.12*	+.24*	+.51	-.16*	-.01*	-.18*
Regression Equation:													
Constant (a).....	+13.76	-128.74	-76.74	+5.21	+2.01	+164.14	+139.49	-4.10	-22.81	-160.53	+121.99	+100.01	+125.84
Regression Coef. for:													
Grayness.....	+.22	-10.20	-4.78	-.12	-.20	+10.85	+5.33	-2.22	-2.12	-8.05	-3.26	-1.04	-.28
Yellowness.....	-.53	+3.81	+1.63	-.10	+.13	+1.19	+2.69	-1.69	-.43	+3.06	+.67	-.66	-.55
Nonlint (S.A.).....	+.46	+.47	+.65	+.04	+.17	-5.39	-1.95	+1.72	+1.62	-.06	-.13	+.89	-.25
2.5% span length.....	-5.28	+221.59	+103.51	+1.35	+1.90	-54.65	-57.48	+21.40	+31.16	+212.92	-20.71	-.38	-22.22
Standard Error (±).....	.56	8.04	3.94	.28	.24	11.49	9.23	5.40	3.68	8.83	1.84	1.96	4.17
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.84	.88	.87	.54	.66	.89	.83	.57	.65	.82	.92	.56	.34
Partial Cor. Coef. for:													
Grayness.....	+.30	-.52	-.49	-.04	-.33	+.10	-.20	-.03	-.12	-.35	-.71	-.24	+.11
Yellowness.....	-.41	+.30	+.27	-.12	+.29	-.13	+.02	-.10	+.01	+.23	+.21	-.14	-.03
Nonlint (S.A.).....	+.52	-.07	+.02	.00	+.44	-.17	+.12	+.14	+.23	-.12	-.12	+.30	-.12
2.5% span length.....	-.30	+.69	+.67	+.16	+.25	-.21	-.27	+.13	+.28	+.64	-.36	-.01	-.18
Micronaire.....	-.09	-.34	-.34	-.33	-.25	+.77	+.74	-.34	-.37	-.33	-.20	-.12	-.23
Beta Coefficients for:													
Grayness.....	+.32*	-.55	-.53	-.06*	-.50*	+.09*	-.22*	-.04*	-.18*	-.41*	-.76	-.40*	+.21*
Yellowness.....	-.29*	+.18*	+.16*	-.12*	+.27*	-.08*	+.01*	-.10*	+.01*	+.17*	+.10*	-.14*	-.03*
Nonlint (S.A.).....	+.54	-.06*	+.01*	+.01	+.60*	-.13*	+.11*	+.20*	+.30*	-.12*	-.08*	+.43*	-.19*
2.5% span length.....	-.18*	+.48	+.47	+.14*	+.20*	-.11*	-.16*	+.11*	+.23*	+.51	-.16*	-.01*	-.19*
Micronaire.....	-.07*	-.26*	-.27*	-.44*	-.29*	+.86	+.93	-.45*	-.45*	-.31*	-.12*	-.16*	-.33*
Regression Equation:													
Constant (a).....	+14.24	-102.39	-63.80	+6.09	+2.60	+78.66	+74.11	+13.60	-9.85	+132.29	+125.44	+102.34	+134.89
Regression Coef. for:													
Grayness.....	+.28	-7.24	-3.33	-.02	-.13	+1.21	-2.04	-.23	-.66	-4.87	-2.88	-.78	+.74
Yellowness.....	-.52	+4.79	+2.11	-.06	+.15	-2.01	+.24	-1.03	+.05	+4.12	+.80	-.57	-.21
Nonlint (S.A.).....	+.44	-.69	+.08	.00	+.15	-1.64	+.92	+.94	+1.05	-1.30	-.29	+.78	-.65
2.5% span length.....	-5.32	+219.43	+102.45	+1.28	+1.86	-47.64	-52.12	+19.94	+30.10	+210.61	-20.99	-.57	-22.96
Micronaire.....	-.13	-6.87	-3.37	-.23	-.15	+22.29	+17.05	-4.62	-3.38	-7.36	-.90	-.61	-2.36
Standard Error (±).....	.56	7.56	3.70	.26	.24	7.27	6.23	5.08	3.42	8.33	1.80	1.95	4.07

*Statistically insignificant

Table 20.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 40 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable	8.3	115	38.2	6.4	4.8	108	86	17	13	74	94	99	98
2.5% span length	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Micronaire	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Fiber str. (1/8" gage)	24	24	24	24	24	24	24	24	24	24	24	24	24
Uniformity ratio	45	45	45	45	45	45	45	45	45	45	45	45	45
Elongation (1/8" gage)	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
Standard Deviation (±) for:													
Dependent variable	1.05	16.0	7.6	.32	.32	15.7	11.1	6.2	4.5	14.4	4.6	2.4	4.3
2.5% span length	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61
Fiber str. (1/8" gage)	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06
Uniformity ratio	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
Elongation (1/8" gage)	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56
Simple Correlation Coef. for:													
2.5% span length	-.14	+.60	+.61	+.26	+.38	-.32	-.32	+.25	+.38	+.60	+.01	+.16	-.14
Micronaire	+.09	-.60	-.62	-.51	-.48	+.87	+.80	-.49	-.55	-.54	-.58	-.41	-.23
Fiber str. (1/8" gage)	-.47	+.93	+.90	+.31	+.43	-.59	-.48	+.28	+.31	+.86	+.49	+.03	+.09
Uniformity ratio	-.09	+.12	+.12	+.05	+.18	+.38	+.42	-.34	+.34	+.19	.00	-.08	-.04
Elongation (1/8" gage)	+.38	-.57	-.54	-.01	.00	+.45	+.44	-.27	-.34	-.51	-.24	+.10	-.12
Multiple Cor. Data for:													
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE													
Multiple Cor. Coef.	.15	.76	.78	.53	.55	.88	.81	.51	.61	.73	.59	.42	.31
Partial Cor. Coef. for:													
2.5% span length	-.12	+.59	+.60	+.17	+.31	-.24	-.22	+.15	+.31	+.58	-.15	+.07	-.21
Micronaire	+.06	-.59	-.61	-.48	-.43	+.87	+.79	-.46	-.51	-.52	-.59	-.39	-.28
Beta Coefficients for:													
2.5% span length	-.12*	+.49	+.49	+.15*	+.28*	-.12*	-.14*	+.14*	+.27*	+.50	-.13*	+.07*	-.21*
Micronaire	+.06*	-.48	-.50	-.48	-.41*	+.85	+.77	-.46	-.48	-.42	-.61	-.40*	-.29*
Regression Equation:													
Constant (a)	+11.94	-86.22	-56.75	+5.91	+2.74	+77.91	+76.89	+8.63	-12.01	-120.20	+131.72	+100.17	+135.85
Regression Coef. for:													
2.5% span length	-3.63	+224.05	+106.66	+1.33	+2.56	-53.92	-43.59	+24.38	+35.04	+208.09	-16.95	+4.43	-26.27
Micronaire	+.11	-12.71	-6.26	-.25	-.21	+21.96	+14.03	-4.66	-3.59	-10.13	-4.56	-1.55	-2.03
Standard Error (±)	1.04	10.34	4.76	.27	.26	7.43	6.48	5.31	3.59	9.86	3.68	2.13	4.10
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE)													
Multiple Cor. Coef.	.54	.94	.92	.54	.55	.88	.81	.51	.63	.88	.66	.53	.32
Partial Cor. Coef. for:													
2.5% span length	+.20	+.34	+.37	+.18	+.24	-.14	-.23	+.18	+.36	+.33	-.34	+.26	-.21
Micronaire	-.26	-.27	-.34	-.45	-.35	+.81	+.75	-.43	-.52	-.17	-.41	-.51	-.21
Fiber str. (1/8" gage)	-.53	+.86	+.79	-.07	+.06	-.13	+.09	-.09	-.19	+.72	+.38	-.37	+.06
Beta Coefficients for:													
2.5% span length	+.20*	+.14*	+.18*	+.18*	+.25*	-.08*	-.17*	+.18*	+.37*	+.20*	-.32*	+.27*	-.25*
Micronaire	-.28*	-.12*	-.17*	-.52	-.38*	+.81	+.80	-.51*	-.58	-.10*	-.40*	-.62*	-.24*
Fiber str. (1/8" gage)	-.74	+.79	+.71	-.08*	+.07*	-.09*	+.07*	-.11*	-.22*	+.69	+.44*	-.47*	+.09*
Regression Equation:													
Constant (a)	+12.55	-95.95	-60.91	+5.93	+2.72	+78.96	+76.28	+9.13	-11.24	-127.96	+130.18	+101.03	+135.56
Regression Coef. for:													
2.5% span length	+6.12	+66.05	+39.16	+1.66	+2.27	-36.91	-53.51	+32.53	+47.49	+82.13	-41.87	+18.35	-30.98
Micronaire	-.48	-3.08	-2.14	-.27	-.20	+20.93	+14.64	-5.15	-4.35	-2.45	-3.05	-2.40	-1.75
Fiber str. (1/8" gage)	-.38	+6.09	+2.60	-.01	+.01	-.66	+.38	-.31	-.48	+4.85	+.96	-.54	+.18
Standard Error (±)	.88	5.35	2.89	.27	.26	7.37	6.46	5.29	3.52	6.89	3.40	1.99	4.09

*Statistically insignificant

Table 20.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.55	.95	.94	.65	.71	.88	.81	.53	.63	.91	.69	.62	.33
Partial Cor. Coef. for:													
2.5% span length.....	+.13	+.41	+.45	-.02	+.07	-.15	-.26	+.22	+.37	+.42	-.40	+.05	-.23
Micronaire.....	-.29	-.47	-.55	-.60	-.59	+.73	+.63	-.27	-.39	-.46	-.47	-.60	-.22
Fiber str. (1/8" gage)....	-.53	+.82	+.73	-.28	-.22	-.13	+.03	-.01	-.13	+.62	+.24	-.49	+.02
Uniformity ratio.....	+.15	+.42	+.48	+.44	+.53	+.03	+.11	-.15	-.09	+.49	+.27	+.37	+.09
Beta Coefficients for:													
2.5% span length.....	+.14*	+.16*	+.21	-.02*	+.06*	-.09*	-.20	+.25*	+.41*	+.23*	-.40*	+.05*	-.29*
Micronaire.....	-.40*	-.26	-.35	-.88	-.81	+.79	+.74	-.38*	-.51*	-.33	-.60	-.92	-.33*
Fiber Str. (1/8" gage)....	-.83	+.68	+.57	-.35*	-.25*	-.10*	+.03*	-.01*	-.17*	+.52	+.29*	-.70	+.02*
Uniformity ratio.....	+.16*	+.18*	+.23	+.48*	+.57	+.02*	+.08*	-.17*	-.09*	+.30	+.26*	+.40*	+.11*
Regression Equation:													
Constant (a).....	+10.90	-174.34	-109.05	+4.48	+.48	+75.20	+66.92	+20.46	-7.11	-245.84	+114.59	+95.93	+130.35
Regression Coef. for:													
2.5% span length.....	+4.19	+75.12	+45.05	-.17	+.54	-40.27	-63.35	+43.86	+52.53	+96.37	-52.53	+3.61	-36.41
Micronaire.....	-.69	-6.73	-4.37	-.46	-.42	+20.52	+13.53	-3.85	-3.82	-7.92	-4.53	-3.57	-2.36
Fiber str. (1/8" gage)....	-.42	+5.28	+2.11	-.05	-.04	-.74	+.14	-.03	-.36	+3.65	+.63	-.79	+.05
Uniformity ratio.....	+.13	+2.31	+1.41	+.12	+.14	+.26	+.70	-.82	-.33	+3.45	+.94	+.74	+.39
Standard Error (±).....	.87	4.84	2.54	.24	.22	7.36	6.42	5.23	3.50	5.99	3.27	1.85	4.08
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO,ELONGATION (1/8" GAGE)													
Multiple Cor. Coef.....	.57	.95	.94	.68	.78	.89	.82	.53	.63	.91	.70	.63	.38
Partial Cor. Coef. for:													
2.5% span length.....	+.18	+.41	+.46	+.09	+.25	-.08	-.16	+.19	+.31	+.42	-.40	+.12	-.29
Micronaire.....	-.27	-.46	-.54	-.58	-.59	+.74	+.65	-.28	-.40	-.44	-.48	-.59	-.25
Fiber str. (1/8" gage)....	-.43	+.79	+.71	-.13	+.02	-.04	+.13	-.03	-.16	+.59	+.18	-.37	-.08
Uniformity ratio.....	+.09	+.39	+.44	+.37	+.47	-.01	+.04	-.13	-.06	+.46	+.28	+.31	+.15
Elongation (1/8" gage)....	+.17	+.07	+.11	+.27	+.44	+.16	+.22	-.04	-.09	+.08	-.07	+.19	-.19
Beta Coefficients for:													
2.5% span length.....	+.22*	+.17*	+.22	+.10*	+.23*	-.05*	-.13*	+.23*	+.37*	+.24*	-.43*	+.14*	-.39*
Micronaire.....	-.36*	-.25	-.34	-.83	-.73	+.81	+.77	-.39*	-.53*	-.32*	-.62	-.88	-.37*
Fiber str. (1/8" gage)....	-.70*	+.70	+.61	-.17*	+.02*	-.03*	+.14*	-.04*	-.23*	+.55	+.24*	-.57*	-.13*
Uniformity ratio.....	+.10*	+.17*	+.22*	+.39	+.45	-.01*	+.03*	-.15*	-.07*	+.29	+.28*	+.34*	+.18*
Elongation (1/8" gage)....	+.20*	+.03*	+.05*	+.30*	+.44*	+.11*	+.18*	-.05*	-.10*	+.05*	-.08*	+.21*	-.25*
Regression Equation:													
Constant (a).....	+5.97	-183.38	-116.31	+2.29	-2.71	+37.15	+21.31	+27.63	+3.57	-258.02	+122.31	+83.93	+155.79
Regression Coef. for:													
2.5% span length.....	+6.57	+78.60	+47.83	+.90	+2.04	-22.15	-41.42	+40.42	+47.35	+101.04	-56.15	+9.66	-48.64
Micronaire.....	-.63	-6.60	-4.26	-.43	-.38	+20.99	+14.09	-3.94	-3.95	-7.73	-4.63	-3.43	-2.67
Fiber str. (1/8" gage)..	-.36	+5.43	+2.23	-.03	.00	-.25	+.73	-.12	-.50	+3.85	+.53	-.65	-.28
Uniformity ratio.....	+.08	+2.21	+1.32	+.10	+.11	-.10	+.27	-.75	-.23	+3.31	+1.01	+.63	+.63
Elongation (1/8" gage)..	+.37	+.86	+.69	+.17	+.25	+2.94	+3.49	-.55	-.81	+1.16	-.61	+.86	-1.95
Standard Error (±).....	.86	4.83	2.52	.23	.20	7.27	6.27	5.22	3.49	5.98	3.26	1.82	4.00

*Statistically insignificant

Table 21.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 40 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Dependent variable	16.6	132	47	6.8	5.2	118	96	8.6	6.3
Grade index	92	92	92	92	92	92	92	92	92
Staple length	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2
Micronaire	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Fiber strength (0 gage)	86	86	86	86	86	86	86	86	86
Uniformity ratio	45	45	45	45	45	45	45	45	45
Standard Deviation (±) for:									
Dependent variable	1.46	16.0	7.3	.3	.3	14.2	11.3	3.4	2.5
Grade index	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Staple length	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Micronaire	.61	.61	.61	.61	.61	.61	.61	.61	.61
Fiber strength (0 gage)	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Uniformity ratio	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Simple Correlation Coef. for									
Grade index	-.32	+.67	+.64	-.01	+.13	-.45	-.43	+.07	+.19
Staple length	-.60	+.87	+.81	+.07	+.40	-.42	-.45	+.32	+.25
Micronaire	.00	-.63	-.58	-.42	-.49	+.77	+.85	-.60	-.56
Fiber strength (0 gage)	-.53	+.87	+.84	-.07	+.20	-.45	-.35	+.33	+.33
Uniformity ratio	-.58	+.06	.00	+.01	.00	+.22	+.40	-.30	-.33
Multiple Cor. Data for:									
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH									
Multiple Cor. Coef.	.60	.91	.86	.09	.40	.50	.51	.33	.26
Partial Cor. Coef. for:									
Grade index	-.05	+.57	+.48	-.05	-.07	-.30	-.28	-.10	+.08
Staple length	-.54	+.84	+.74	+.09	+.38	-.26	-.30	+.33	+.18
Beta Coefficients for:									
Grade index	-.04*	+.32	+.32	-.06*	-.08*	-.32*	-.29*	-.11*	+.09*
Staple length	-.58	+.71	+.65	+.10*	+.43*	-.27*	-.31*	+.37*	+.20*
Regression Equation:									
Constant (a)	+43.82	-304.39	-138.25	+6.22	+1.60	+306.40	+254.22	-25.00	-13.36
Regression Coef. for:									
Grade index	-.01	+.87	+.40	.00	.00	-.75	-.54	-.06	+.04
Staple length	-.75	+10.12	+4.23	+.02	+.11	-3.38	-3.08	+1.12	+.46
Standard Error (±)	1.17	6.54	3.80	.26	.27	12.29	9.69	3.19	2.46
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE									
Multiple Cor. Coef.	.73	.92	.86	.52	.56	.77	.85	.68	.58
Partial Cor. Coef. for:									
Grade index	-.28	+.49	+.41	-.28	-.25	-.05	+.06	-.39	-.15
Staple length	-.68	+.81	+.70	-.12	+.25	-.01	.00	+.12	-.03
Micronaire	-.52	-.24	-.13	-.52	-.43	+.68	+.80	-.62	-.53
Beta Coefficients for:									
Grade index	-.24*	+.28	+.29*	-.31*	-.26*	-.04*	+.04*	-.39*	-.15*
Staple length	-.77	+.67	+.62	-.13*	+.26*	.00*	.00*	+.11*	-.03*
Micronaire	-.54	-.12*	-.09*	-.66	-.50*	+.75	+.88	-.75	-.66
Regression Equation:									
Constant (a)	+62.24	-257.17	-122.89	+10.31	+5.03	+54.20	+21.28	+34.83	+26.25
Regression Coef. for:									
Grade index	-.06	+.74	+.35	-.01	-.01	-.09	+.08	-.22	-.07
Staple length	-.99	+9.50	+4.03	-.03	+.07	-.05	.00	+.33	-.07
Micronaire	-1.29	-3.31	-1.08	-.29	-.24	+17.67	+16.32	-4.19	-2.78
Standard Error (±)	.99	6.35	3.76	.22	.24	9.01	5.85	2.49	2.08

*Statistically insignificant

Table 21.--Continued

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Multiple Cor. Coef.....	.74	.95	.91	.53	.56	.79	.85	.74	.64
Partial Cor. Coef. for									
Grade index.....	-.20	+.34	+.24	-.21	-.20	+.06	+.06	-.46	-.25
Staple length.....	-.55	+.68	+.47	-.03	+.23	+.16	+.01	-.16	-.23
Micronaire.....	-.51	-.40	-.24	-.51	-.42	+.70	+.79	-.67	-.58
Fiber str. (0 gage).....	-.13	+.66	+.56	-.12	-.06	-.26	-.01	+.39	+.33
Beta Coefficients for:									
Grade index.....	-.19*	+.14*	+.14*	-.25*	-.23*	+.05*	+.04*	-.44	-.26*
Staple length.....	-.68	+.42	+.35	-.04*	+.31*	+.15*	+.01*	-.16*	-.28*
Micronaire.....	-.52	-.17*	-.14*	-.64	-.49*	+.78	+.88	-.80	-.71
Fiber str. (0 gage).....	-.15*	+.43	+.47	-.17*	-.09*	-.27*	-.01*	+.48*	+.45*
Regression Equation:									
Constant (a).....	+60.16	-198.15	-92.86	+9.89	+4.80	+21.29	+20.12	+43.91	+34.75
Regression Coef. for:									
Grade index.....	-.05	+.39	+.17	-.01	-.01	+.11	+.08	-.25	-.11
Staple length.....	-.88	+6.03	+2.28	-.01	+.08	+1.88	+.06	-.49	-.64
Micronaire.....	-1.25	-4.45	-1.65	-.28	-.24	+18.31	+16.34	-4.46	-2.97
Fiber str. (0 gage).....	-.04	+1.17	+.59	-.01	.00	-.66	-.02	+.28	+.20
Standard Error (±).....	.99	4.80	3.12	.22	.24	8.71	5.85	2.29	1.96
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO									
Multiple Cor. Coef.....	.81	.96	.91	.67	.61	.81	.85	.74	.64
Partial Cor. Coef. for:									
Grade index.....	-.14	+.31	+.24	-.30	-.25	+.10	+.06	-.46	-.25
Staple length.....	-.39	+.59	+.43	-.26	+.10	+.27	+.01	-.16	-.20
Micronaire.....	-.16	-.49	-.19	-.65	-.49	+.71	+.71	-.59	-.48
Fiber str. (0 gage).....	-.20	+.69	+.56	-.08	-.04	-.29	-.01	+.40	+.33
Uniformity ratio.....	-.50	+.31	.00	+.48	+.29	-.30	.00	+.04	-.01
Beta Coefficients for:									
Grade index.....	-.12*	+.12*	+.14*	-.33*	-.28*	+.08*	+.04*	-.45	-.26*
Staple length.....	-.43*	+.35	+.35*	-.34*	+.13*	+.29*	.00*	-.19*	-.28*
Micronaire.....	-.16*	-.27	-.13*	-1.07	-.74	+.97	+.88	-.83	-.69
Fiber str (0 gage).....	-.20*	+.44	+.47	-.10*	-.05*	-.30*	-.01*	+.48*	+.44*
Uniformity ratio.....	-.45	+.12*	.00*	+.53*	+.31*	-.24*	.00*	+.04*	-.01*
Regression Equation:									
Constant (a).....	+67.70	-221.31	-92.62	+8.28	+3.75	+61.07	+19.91	+42.38	+35.17
Regression Coef. for:									
Grade index.....	-.03	+.34	+.17	-.01	-.01	+.20	+.08	-.25	-.11
Staple length.....	-.55	+5.04	+2.29	-.08	+.03	+3.59	+.05	-.56	-.62
Micronaire.....	-.39	-7.09	-1.63	-.46	-.36	+22.84	+16.32	-4.63	-2.92
Fiber str. (0 gage).....	-.05	+1.22	+.59	.00	.00	-.73	-.02	+.28	+.19
Uniformity ratio.....	-.52	+1.58	-.02	+.11	+.07	-2.71	+.01	+.10	-.03
Standard Error (±).....	.85	4.56	3.12	.20	.23	8.32	5.85	2.29	1.96

*Statistically insignificant

Table 22.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 40 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Mean Values for:									
Dependent variable	16.57	131.7	47.2	6.8	5.2	117.8	96.0	8.6	6.3
Grayness	2	2	2	2	2	2	2	2	2
Yellowness	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
2.5% span length	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Micronaire	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Standard Deviation (±) for:									
Dependent variable	1.46	16.0	7.3	.3	.3	14.2	11.3	3.4	2.5
Grayness	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Yellowness	.59	.59	.59	.59	.59	.59	.59	.59	.59
Nonlint content (S.A.)	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2.5% span length	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire	.61	.61	.61	.61	.61	.61	.61	.61	.61
Simple Correlation Coef. for:									
Grayness	+.37	-.75	-.71	-.23	-.32	+.53	+.46	-.25	-.32
Yellowness	-.15	+.01	+.02	-.29	-.20	+.25	+.21	-.37	-.27
Nonlint (S.A.)	+.36	-.40	-.45	+.11	+.05	+.09	+.06	+.19	+.09
2.5% span length	-.54	+.57	+.56	-.09	+.21	-.32	-.34	+.43	+.26
Micronaire	.00	-.63	-.58	-.42	-.49	+.77	+.85	-.60	-.56
Multiple Cor. Data for:									
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS									
Multiple Cor. Coef.	.41	.75	.71	.36	.37	.57	.50	.43	.41
Partial Cor. Coef. for:									
Grayness	+.39	-.75	-.71	-.22	-.31	+.53	+.46	-.24	-.32
Yellowness	-.19	+.10	+.09	-.28	-.19	+.25	+.20	-.36	-.26
Beta Coefficients for:									
Grayness	+.38*	-.75	-.71	-.21*	-.31*	+.52	+.45	-.22*	-.31*
Yellowness	-.18*	+.06*	+.06*	-.28*	-.18*	+.21*	+.18*	-.35*	-.25*
Regression Equation:									
Constant (a)	+16.91	+146.2	+53.36	+7.23	+5.59	+90.89	+77.88	+15.68	+10.68
Regression Coef. for:									
Grayness	+.46	-9.96	-4.31	-.05	-.07	+6.11	+4.20	-.62	-.64
Yellowness	-.43	+1.75	+.79	-.12	-.09	+5.10	+3.38	-2.02	-1.06
Standard Error (±)	1.33	10.63	5.17	.25	.27	11.66	9.80	3.05	2.33
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS NONLINT (S.A.)									
Multiple Cor. Coef.	.42	.76	.71	.41	.45	.62	.55	.52	.49
Partial Cor. Coef. for:									
Grayness	+.23	-.69	-.59	-.30	-.41	+.56	+.50	-.39	-.42
Yellowness	-.11	+.19	+.09	-.14	-.01	+.07	+.03	-.16	-.07
Nonlint (S.A.)	+.09	+.19	+.02	+.22	+.28	-.28	-.27	+.32	+.30
Beta Coefficients for:									
Grayness	+.30*	-.88	-.72	-.40*	-.56*	+.75	+.68	-.50*	-.57*
Yellowness	-.12*	+.15*	+.07*	-.15*	-.01*	+.06*	+.03*	-.17*	-.07*
Nonlint (S.A.)	+.12*	+.19*	+.02*	+.30*	+.39*	-.35*	-.35*	+.43*	+.41*
Regression Equation:									
Constant (a)	+16.24	+134.57	+52.76	+6.93	+5.17	+109.71	+92.80	+10.15	+6.74
Regression Coef. for:									
Grayness	+.37	-11.63	-4.39	-.09	-.14	+8.78	+6.32	-1.41	-1.20
Yellowness	-.30	+4.00	+.91	-.07	.00	+1.51	+.54	-.96	-.31
Nonlint (S.A.)	+.14	+2.41	+.12	+.06	+.09	-3.86	-3.06	+1.14	+.81
Standard Error (±)	1.33	10.43	5.17	.24	.26	11.18	9.44	2.89	2.22

*Statistically insignificant

Table 22.--Continued

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH									
Multiple Cor. Coef.....	.67	.86	.84	.47	.45	.64	.58	.60	.50
Partial Cor. Coef. for:									
Grayness.....	+.33	-.75	-.69	-.28	-.41	+.57	+.51	-.37	-.43
Yellowness.....	-.11	+.21	+.08	-.13	-.01	+.08	+.04	-.19	-.08
Nonlint (S.A.).....	+.27	+.05	-.17	+.27	+.25	-.24	-.22	+.25	+.26
2.5% span length.....	-.58	+.63	+.63	-.24	+.08	-.18	-.21	+.35	+.12
Beta Coefficients for:									
Grayness.....	+.36*	-.81	-.73	-.37*	-.56*	+.75	+.67	-.45*	-.57*
Yellowness.....	-.10*	+.13*	+.05*	-.14*	-.01*	+.07*	+.04*	-.18*	-.08*
Nonlint (S.A.).....	+.32*	+.04*	-.15*	+.39*	+.36*	-.30*	-.28*	+.32*	+.37*
2.5% span length.....	-.56	+.44	+.47	-.23*	+.08*	-.15*	-.19*	+.31*	+.12*
Regression Equation:									
Constant (a).....	+41.62	-86.92	-55.42	+8.84	+4.46	+176.85	+159.14	-23.32	-2.46
Regression Coef. for:									
Grayness.....	+.44	-10.77	-4.44	-.08	-.14	+8.78	+6.28	-1.27	-1.20
Yellowness.....	-.24	+3.46	+.64	-.06	-.01	+1.67	+.70	-1.04	-.33
Nonlint (S.A.).....	+.36	+.49	-.82	+.08	+.08	-3.28	-2.48	+.84	+.73
2.5% span length.....	-23.37	+201.27	+99.16	-1.77	+.65	-61.48	-60.67	+30.39	+8.43
Standard Error (±).....	1.08	8.06	4.01	.23	.26	10.99	9.23	2.72	2.20
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE									
Multiple Cor. Coef.....	.72	.89	.86	.52	.52	.79	.88	.71	.59
Partial Cor. Coef. for:									
Grayness.....	+.47	-.53	-.44	-.04	-.14	+.12	-.22	+.05	-.10
Yellowness.....	-.05	+.29	+.15	-.09	+.04	-.04	-.18	-.11	-.01
Nonlint (S.A.).....	+.15	-.09	-.28	+.18	+.16	-.04	+.11	+.09	+.15
2.5% span length.....	-.61	+.66	+.65	-.26	+.08	-.21	-.32	+.38	+.12
Micronaire.....	-.36	-.39	-.35	-.25	-.29	+.60	+.82	-.49	-.37
Beta Coefficients for:									
Grayness.....	+.71	-.56	-.48*	-.07*	-.22*	+.14*	-.21*	+.06*	-.15*
Yellowness.....	-.04*	+.17*	+.09*	-.09*	+.04*	-.03*	-.11*	-.10*	-.01*
Nonlint (S.A.).....	+.18*	-.07*	-.25*	+.26*	+.22*	-.04*	+.08*	+.11*	+.19*
2.5% span length.....	-.57	+.43	+.47	-.24*	+.07*	-.14*	-.17*	+.30*	+.11*
Micronaire.....	-.40*	-.29*	-.29*	-.34*	-.39*	+.71	+1.02	-.60	-.49*
Regression Equation:									
Constant (a).....	+45.31	-57.09	-41.93	+9.41	+5.19	+113.27	+86.40	-10.50	+5.39
Regression Coef. for:									
Grayness.....	+.85	-7.41	-2.92	-.02	-.05	+1.61	-1.92	+.17	-.32
Yellowness.....	-.10	+4.58	+1.15	-.04	+.02	-.71	-2.03	-.56	-.04
Nonlint (S.A.).....	+.20	-.82	-1.42	+.05	+.05	-.48	+.72	+.28	+.38
2.5% span length.....	-23.67	+198.83	+98.05	-1.81	+.59	-56.27	-54.71	+29.34	+7.78
Micronaire.....	-.96	-7.78	-3.52	-.15	-.19	+16.58	+18.97	-3.34	-2.05
Standard Error (±).....	1.01	7.43	3.76	.23	.25	8.77	5.27	2.36	2.05

*Statistically insignificant

Table 23.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 40 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1973

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Mean Values for:									
Dependent variable	16.57	131.7	47.2	6.8	5.2	117.8	96.0	8.6	6.3
2.5% span length	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Micronaire	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Fiber str. (1/8" gage)	24	24	24	24	24	24	24	24	24
Uniformity ratio	45	45	45	45	45	45	45	45	45
Elongation (1/8" gage)	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
Standard Deviation (±) for:									
Dependent variable	1.46	16.0	7.3	.3	.3	14.2	11.3	3.4	2.5
2.5% span length	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire	.61	.61	.61	.61	.61	.61	.61	.61	.61
Fiber str. (1/8" gage)	2	2	2	2	2	2	2	2	2
Uniformity ratio	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Elongation (1/8" gage)	.56	.56	.56	.56	.56	.56	.56	.56	.56
Simple Correlation Coef. for:									
2.5% span length	-.54	+.57	+.56	-.09	+.21	-.32	-.34	+.43	+.26
Micronaire	.00	-.63	-.58	-.42	-.49	+.77	+.85	-.60	-.56
Fiber str. (1/8" gage)	-.66	+.94	+.86	+.06	+.32	-.58	-.56	+.41	+.35
Uniformity ratio	-.58	+.06	.00	+.01	.00	+.22	+.40	-.30	-.33
Elongation (1/8" gage)	+.25	-.60	-.59	+.39	.00	+.49	+.43	-.41	-.38
Multiple Cor. Data for:									
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE									
Multiple Cor. Coef.	.55	.76	.72	.46	.50	.79	.87	.67	.58
Partial Cor. Coef. for:									
2.5% span length	-.55	+.55	+.54	-.21	+.11	-.22	-.26	+.38	+.16
Micronaire	-.15	-.62	-.55	-.46	-.47	+.76	+.85	-.57	-.53
Beta Coefficients for:									
2.5% span length	-.57	+.44	+.45	-.20*	+.10*	-.15*	-.14*	+.31*	+.13*
Micronaire	-.13*	-.53	-.47	-.47	-.47	+.74	+.82	-.53	-.53
Regression Equation:									
Constant (a)	+44.79	-40.97	-36.69	+9.31	+5.16	+112.96	+84.16	-13.33	+4.51
Regression Coef. for:									
2.5% span length	-23.74	+203.37	+94.77	-1.48	+.86	-59.42	-45.60	+30.10	+9.75
Micronaire	-.31	-13.93	-5.68	-.20	-.23	+17.37	+15.30	-2.93	-2.23
Standard Error (±)	1.22	10.39	5.06	.23	.25	8.80	5.66	2.51	2.08
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE)									
Multiple Cor. Coef.	.81	.95	.87	.48	.50	.79	.87	.68	.58
Partial Cor. Coef. for:									
2.5% span length	-.27	+.23	+.24	-.10	+.10	-.11	-.21	+.38	+.16
Micronaire	-.59	-.37	-.24	-.46	-.41	+.67	+.80	-.54	-.48
Fiber str. (1/8" gage)	-.72	+.87	+.71	-.15	.00	-.18	-.05	-.11	-.05
Beta Coefficients for:									
2.5% span length	-.19*	+.09*	+.15*	-.11*	+.10*	-.08*	-.13*	+.36*	+.16*
Micronaire	-.52	-.15*	-.15*	-.56	-.47*	+.67	+.81	-.58	-.55
Fiber str. (1/8" gage)	-.85	+.80	+.69	-.19*	.00*	-.15*	-.03*	-.11*	-.05*
Regression Equation:									
Constant (a)	+45.75	-50.95	-40.63	+9.35	+5.16	+114.67	+84.45	-13.04	+4.62
Regression Coef. for:									
2.5% span length	-8.14	+41.38	+30.84	-.84	+.86	-31.71	-40.87	+34.88	+11.45
Micronaire	-1.26	-4.05	-1.78	-.24	-.23	+15.69	+15.01	-3.23	-2.33
Fiber str. (1/8" gage)	-.60	+6.24	+2.46	-.02	.00	-1.07	-.18	-.18	-.07
Standard Error (±)	.85	5.07	3.58	.23	.25	8.66	5.65	2.49	2.08

*Statistically insignificant

Table 23.--Continued

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO									
Multiple Cor. Coef.	.89	.95	.87	.61	.58	.80	.87	.68	.58
Partial Cor. Coef. for:									
2.5% span length	-.41	+.27	+.24	-.28	-.03	-.05	-.22	+.37	+.19
Micronaire	-.25	-.46	-.21	-.59	-.50	+.63	+.70	-.42	-.35
Fiber str. (1/8" gage)	-.63	+.84	+.66	-.34	-.16	-.09	-.08	-.07	+.01
Uniformity ratio	-.60	+.29	+.03	+.42	+.33	-.15	+.09	-.06	-.11
Beta Coefficients for:									
2.5% span length	-.26*	+.10*	+.15*	-.31*	-.04*	-.04*	-.15*	+.38*	+.20*
Micronaire	-.18*	-.24	-.16*	-.92	-.75	+.76	+.76	-.53*	-.47*
Fiber str. (1/8" gage)	-.60	+.74	+.68	-.46*	-.21*	-.09*	-.07*	-.08*	+.01*
Uniformity ratio	-.45	+.12*	+.02*	+.47*	+.36*	-.12*	+.06*	-.06*	-.11*
Regression Equation:									
Constant (a)	+63.92	-102.11	-43.64	+8.13	+4.01	+135.94	+77.12	-11.13	+7.72
Regression Coef. for:									
2.5% span length	-10.71	+47.64	+30.81	-2.32	-.31	-16.12	-48.03	+37.16	+14.61
Micronaire	-.45	-6.42	-1.95	-.40	-.36	+17.78	+14.18	-2.99	-1.97
Fiber str. (1/8" gage)	-.42	+5.72	+2.43	-.06	-.03	-.61	-.36	-.13	+.01
Uniformity ratio	-.52	+1.50	+.10	+.10	+.08	-1.32	+.52	-.15	-.23
Standard Error (±)	.68	4.85	3.58	.21	.24	8.56	5.63	2.49	2.07
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATION, ELONGATION (1/8" GAGE)									
Multiple Cor. Coef.	.91	.95	.87	.76	.62	.82	.87	.68	.60
Partial Cor. Coef. for:									
2.5% span length	-.51	+.25	+.22	-.05	+.08	+.07	-.17	+.30	+.10
Micronaire	-.33	-.46	-.21	-.62	-.49	+.66	+.70	-.43	-.37
Fiber str. (1/8" gage)	-.70	+.80	+.60	-.05	.00	+.07	-.02	-.12	-.08
Uniformity ratio	-.55	+.29	+.04	+.32	+.25	-.24	+.06	-.02	-.05
Elongation (1/8" gage)	-.41	-.04	-.05	+.58	+.29	+.31	+.10	-.12	-.19
Beta Coefficients for:									
2.5% span length	-.32	+.10*	+.14*	-.05*	+.09*	+.06*	-.12*	+.33*	+.12*
Micronaire	-.23*	-.24*	-.17*	-.80	-.69	+.80	+.77	-.56*	-.51*
Fiber str. (1/8" gage)	-.76	+.73	+.66	-.06*	.00*	+.07*	-.02*	-.16*	-.12*
Uniformity ratio	-.37	+.12*	+.03*	+.29*	+.27*	-.19*	+.04*	-.02*	-.05*
Elongation (1/8" gage)	-.27*	-.02*	-.03*	+.66	+.33*	+.26*	+.07*	-.13*	-.22*
Regression Equation:									
Constant (a)	+71.19	-97.25	-38.67	+4.07	+1.78	+51.70	+58.13	-.78	+20.51
Regression Coef. for:									
2.5% span length	-13.46	+45.77	+28.77	-.35	+.76	+23.53	-38.94	+32.15	+8.47
Micronaire	-.56	-6.49	-2.02	-.35	-.33	+18.84	+14.42	-3.11	-2.13
Fiber str. (1/8" gage)	-.54	+5.64	+2.35	-.01	.00	+.50	-.12	-.26	-.15
Uniformity ratio	-.43	+1.55	+.16	+.06	+.06	-2.14	+.34	-.06	-.11
Elongation (1/8" gage)	-.70	-.46	-.45	+.31	+.17	+6.61	+1.46	-.79	-.98
Standard Error (±)	.62	4.85	3.58	.17	.23	8.15	5.60	2.47	2.03

*Statistically insignficant

MEASURES USED IN STATISTICAL ANALYSIS

Some of the statistical concepts used in this study may be unfamiliar to many who will find the information in this report useful. Results reported in this study include the means, standard deviations, simple and multiple correlation coefficients, beta values, partial correlation coefficients and regression equations for each cotton quality measurement. Formulas of each of these results may be found in any good textbook on statistical correlation. However, for those not familiar with these concepts the following common language explanation is given for each item as it is used in this report:

(1) Mean Value is the simple arithmetical average of each measured property for the spinning lots included in the study.

(2) Standard deviation is a measure of dispersion around the mean value, expressed in the same terms as the variable. For a normal distribution, approximately 68 percent of the values will be within plus or minus one standard deviation of the mean, 95 percent within plus or minus two standard deviations, and nearly all values will be within plus or minus three standard deviations.

Example: (from Table 15, column 1, page 89)
The mean or average value for picker and card waste, the dependent variable is 5.7 percent and the standard deviation is 1.05 percent. This indicates that 68 percent of the lots tested in the medium staple group should contain between 4.6 and 6.8 percent waste (5.7 ± 1.05). Ninety five percent of the lots tested would have from 3.6 to 7.8 percent waste (5.7 ± 2.10) and nearly all of the test lots would show waste values between 2.6 and 8.8 percent (5.7 ± 3.15).

(3) Simple correlation coefficient (r) is a measure of the linear relationship between two variables, ie. how one variable is associated with the other. A correlation coefficient of 0 indicates no relationship, and 1.0 indicates a perfect relationship. A plus sign before the correlation coefficient indicates that the values for both variables change in the same direction, whereas a minus sign indicates that they change in opposite directions.

Example: (from Table 15, column 1, page 89)
The simple correlation coefficient (r) of grade index with picker and card waste is -.51. This indicates that grade index and picker and card waste are related. It further indicates by the - sign that as one goes up or down the other goes in the opposite direction.

(4) Multiple correlation coefficient (R) is a measure of the linear relationship between one dependent variable and two or more independent variables. It has no plus or minus sign because one independent variable may contribute positively, and another negatively, in explaining the variation in the dependent variable. The multiple R may fall between 0 and 1.0, with 0 indicating no relationship and 1.0 a perfect relationship.

Example: (from Table 15, column 1, page 89)
The multiple R for the dependent variable of picker and card waste with independent variables of grade index, staple length and micronaire is .52. This indicates that the combination of grade index, staple length and micronaire shows a definite relationship to picker and card waste. It does not explain, however, whether grade index, staple length and micronaire contribute postively or negatively to picker and card waste or which of the three is most important.

(5) Although the coefficient of determination (R^2, or r^2) is not given, it may be easily obtained by squaring the simple r's or multiple R's and multiplying by 100. This gives the percentage of variation explained, a measure of the amount of variation in the dependent variable which is explained by variation in the independent variables.

Example:
The multiple R in the example above is .52. When squared and multiplied by 100 the result is 27.0. This means that 27.0 percent of the variation in picker and card waste is explained by grade index, staple length and micronaire. The remaining 73.0 percent of the variation is unexplained.

(6) Partial correlation coefficient (r) in a multiple analysis is similar to a simple correlation coefficient. The simple r indicates the statistical relationship between two variables without any control of other variables. In a multiple analysis, the partial correlation coefficient is one measure of the net relationship between one independent variable and the dependent variable while the influence of the other independent variables are statistically removed.

Example: (from Table 15, column 1, page 89)
The partial correlation coefficients (r) for picker and card waste with grade index, staple length and micronaire are: -.50 for grade index, -.08 for staple length and -.02 for micronaire. This shows that picker and card waste is related to grade index and that when one goes up or down the other goes in the opposite direction. It further shows that staple length and micronaire have less affect on picker and card waste than grade index since the values for these two variables are much smaller.

(7) Beta coefficients (B) in a multiple correlation are sometimes preferred over use of partial r's. A Beta coefficient is another measure of the relative importance of a variable in a multiple correlation, with the influence of the other variables removed. Quite often, only one of these measures (Beta or partial r) is used for interpretation; both are included in this report. An asterisk beside the Beta value indicates that the result is statistically insignificant (less than three times its standard error).

Example:
The Beta (B) coefficients in the above example are -.50 for grade index, -.07* for staple length and -.01* for micronaire. This shows the same relative results as the partial correlation coefficients (r) and the * further indicates that the -.07 Beta value for staple length and -.01 for micronaire are statistically insignificant.

(8) Regression equation or estimating equation is used to predict changes in the dependent variable which will result from changes in the independent variable or variables. It is written:

$$Y = a + b_1X_1 + b_2X_2 + \ldots b_NX_N$$

where Y is the dependent variable and the X's are independent variables.

The constant "a" indicates the starting point or height of the regression line when it is to be plotted on a graph or to be used in calculating changes in the dependent variable. The regression coefficient "b" indicates the change in the dependent variable that is associated with each unit change in the independent variable. The spread or scatter of the data around the regression line is measured by the standard error. The standard error has the same relationship to the regression line as the standard deviation has to the mean value. (see paragraph (2) above)

Example: (from Table 15, column 1, page 89)

Regression equation for picker and card waste:

Constant (a)	+18.48
Regression coefficients (b)	
Grade index	-.11
Staple length	-.08
Micronaire	-.03
Standard error	±.90

With regression coefficients (b) of -.11 for grade index, -.08 for staple length and -.03 for micronaire reading the following average conditions should exist:

1. With any unit change in grade index, picker and card waste percentage should change .11 in the opposite direction.

2. With any unit change (32nd) in staple length, picker and card waste percentage should change .08 in the opposite direction.

3. With any unit change (1.0) in micronaire reading, picker and card waste percentage should change .03 in the opposite direction.

Expressing this equation algebraically we have:

Estimated picker and card waste (percent) =
18.48 - .11 (grade index) -.08 (staple length) -.03 (micronaire)

Thus if we wished to predict the amount of picker and card waste from a bale of cotton of Strict Low Middling (94 index), a staple length of 1-1/16 inches (34 32ds) and a micronaire of 4.6, the equation would be:

$$\text{Estimated picker and card waste} = 18.48 - .11(94) - .08(34) - .03(4.6)$$

$$\text{Estimated picker and card waste} = 5.4\%$$

The standard error of the equation of ±.90 indicates that actual picker and card waste obtained from this kind of cotton would be within plus or minus .90 percent (between 4.50 and 6.30) 68 times in 100.

A check on the accuracy of this figure can be made from the average results for SLM grade, 1-1/16 inch staple, in Table 3 for the different Areas.

Regression equations are given in the tables for multiple relationships only. Equations for simple relationships may be calculated by using the formula:

$$Y = a + bX$$

$$\text{where } a = \text{Mean } Y - b(\text{Mean } X)$$

$$b = r \frac{\text{Std. Dev. } Y}{\text{Std. Dev. } X}$$

INTERPRETING STATISTICAL DATA

In referring to the data presented in the tables of this report, it is well to keep in mind several factors which influence the results and could lead to erroneous conclusions.

Correlation values are significantly influenced by the specific variables included, and by their number. This is due to the interrelationships of fiber properties. As interrelated properties are added to a correlation, the specific contribution of a given property may decrease sharply while at the same time the overall correlation will increase. For example, a correlation of staple length with yarn strength usually shows a good relationship, with a large amount of the variation in yarn strength explainable by differences in staple length. But, as other measures are taken into consideration, particularly fiber strength at 1/8-inch gage, the importance of staple length in explaining the total variation in yarn strength decreases rather sharply, even though the total variation explained is increased. This situation occurs because fiber strength is more closely related to yarn strength than is staple length. Yet, when fiber strength is not included in the correlation, some of the effects of strength are evidenced through the interrelation of strength and staple length.

Perhaps the most important fact to be kept in mind is that the use of only one statistic, such as a multiple R, a partial r, or a Beta value, can lead to erroneous conclusions. In order to determine the importance of any variable, all of the statistical items for each study should be considered.

BASIS FOR INTERPRETATION OF TEST RESULTS

The following explanation of the data published in Tables 1 through 8 of this report may be helpful in the interpretation of test results:

Classification

Classification was made in accordance with the official Cotton Standards for grade and staple length. These results are presented under the usual terms for the individual lots but the grade values were converted to an index for averaging in the summary tables.

Grade index, as reported in the summary tables is designed to reflect differences in market value and provides a method for averaging the grade for a number of individual lots. Middling grade is used as the basis of 100, and higher or lower index numbers reflect higher or lower average market values, respectively. Index values for white, spotted, tinged and gray grades of upland cotton are shown below:

Grade		Grade Index						
Name	Code:	Plus (0)	White (1)	Light Spotted (2)	Spotted (3)	Tinged (4)	Light Gray (5)	Gray (6)
Good Middling	(1):		105	103	101	94	99	93
Strict Middling	(2):		104	102	99	91	98	91
Middling	(3):	102	100	97	93	82	92	84
Strict Low Middling	(4):	97	94	89	83	75	85	75
Low Middling	(5):	90	85	80	75	68		
Strict Good Ordinary	(6):	81	76					
Good Ordinary	(7):	73	70					
Below Grade	(8):		60					

The grade of cotton is obtained by evaluating color, leaf and preparation in relation to the official standards. Grade provides an indication of fiber color and the waste content of a sample of cotton. Experience has shown the average relationship between picker and card waste and various grades of upland cotton to be approximately as given in the tabulation shown in the

subsequent section on manufacturing waste. In comparing these average grade figures with the picker and card waste data, it should be understood that variations from the averages for individual samples are attributable to the nature of the extraneous material present in the cotton, the characteristics of the fiber, and whether the grade designation was low because of poor color.

Staple length is the length of a typical portion of the fibers in the samples as determined by the classer in comparison with official standards. Uniformity of fiber length, as well as other fiber properties, influence to some extent the classer's selection of the typical portion of the fibers on which the staple length designation is based. In general, there is a fairly close relationship between the staple length as designated by the classer and the fineness and strength of the yarn that can be manufactured from the cotton. These relationships, however, are also influenced by other fiber properties, the measurements of which will be discussed in the paragraphs which follow.

Fiber Tests

Fiber length data were obtained by the Digital Fibrograph method for the short, medium and long staple American upland samples and by the array method for the extra long American Pima and upland samples. Briefly, the Digital Fibrograph method consists of placing representative specimens of cotton weighing approximately 30 centigrams at random on a pair of combs, parallelizing the beards of cotton extending from one side of the combs, and scanning these beards photoelectrically on the instrument at 3 length intervals beginning at 0.15 inch from the teeth of the combs and ending near the outer fringe. The 2.5 percent span length and the 50/2.5 uniformity ratio values reported for each lot are based on five specimens tested by each of two technicians.

The Digital Fibrograph 2.5 percent span length values reported indicate the length which will be spanned by 2.5 percent of the fibers when they are parallel and randomly distributed. It is also the length where the amount of fibers indicated by the instrument is 2.5 percent of the amount at the starting point of 0.15 inch. The Digital Fibrograph 2.5 percent span length values are closely related to staple length designations.

The Digital Fibrograph 50/2.5 uniformity ratio values reported indicate the relative uniformity of fiber length in the samples. They represent the ratios between the 50 percent span length and the 2.5 percent span length, expressed as percentages. Larger values indicate more uniform fiber length distribution. Unusually low fiber length uniformity tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. The following adjective descriptions will serve to classify cottons from the standpoint of 2.5 percent span length and fiber length uniformity:

2.5 percent span length		50/2.5 uniformity ratio	
Below 1.00	Short	Below 42	Very low
1.00 - 1.14	Medium	42 - 43	Low
1.15 - 1.29	Long	44 - 45	Average
Above 1.29	Extra-long	46 - 47	High
		Above 47	Very high

Data source - 1575 American upland lots tested from the crops of 1966-68.

Array tests for the extra long staple American Pima and upland samples were performed on the Suter-Webb fiber sorter. Briefly, this method consists of parallelizing the fibers in a representative 75-milligram specimen of cotton through a series of combs, separating the fibers into length groups at 1/8-inch intervals, and weighing the fibers in each length group. The upper quartile length and coefficient of variation values reported are based on one specimen tested by each of two technicians.

The array upper quartile length values reported indicate the length which is exceeded by 25 percent of the weight of the fibers in the samples. They are closely related to and longer than both the Fibrograph and the classer's staple designations. This relationship may vary, however, because the methods measure different fiber length characteristics.

The array coefficient of length variation values reported indicate the relative variability of fiber length in the samples. They represent the standard deviation of the weight-length frequencies expressed as a percentage of the mean length. Smaller values indicate more uniform fiber length distributions. Excessive fiber length variation tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. It is, therefore, considered desirable for a cotton to have a low coefficient of variation. The following adjective descriptions will serve to classify cottons from the standpoint of upper quartile length and fiber length variation:

Upper Quartile Length		Coefficient of Fiber Length Variation	
Below 1.10	Short	Below 26	Very low variation
1.10 - 1.24	Medium	26 - 29	Low variation
1.25 - 1.39	Long	30 - 33	Average variation
Above 1.39	Extra Long	34 - 37	High variation
		Above 37	Very high variation

Data source - 830 American upland lots tested from the crops of 1958-60 (more recent data not available).

Fiber fineness and maturity in combination were determined by the micronaire test. This is an instrument test which measures the resistance of a plug of cotton to air flow. A representative standard weight of cotton fibers is placed in the instrument specimen holder and compressed to a fixed

volume. Air at a known pressure is forced through the specimen and the amount of flow is indicated by a direct reading scale. Readings obtained are relative measures of either the weight per unit length, or the cross sectional size of the fibers. Because the instrument measures may differ from the actual weight per inch, depending upon the fiber characteristics of the sample, the results are reported in terms of "micronaire reading" instead of micrograms per inch. These readings are taken from the curvilinear scale adopted in 1950, and now in international use. Fiber fineness contributes to yarn strength, particularly when fine numbers are spun, but it also tends to increase neppiness and to require a reduced rate of processing.

Fiber maturity, also an important factor affecting the appearance of yarns and fabrics, is a desirable characteristic from the standpoint of low picker and card waste. Immature fibers are susceptible to the formation of neps, and contribute to lower yarn appearance grades. The desirability of micronaire reading, therefore, depends on the specific end product or use of the cotton.

Several instruments, including the Micronaire, Fibronaire, and Port-Ar, may be used for these tests. All instruments now use the same scale and report results in the same terms, i.e. "micronaire reading". The micronaire reading is now a part of the official standards for upland cotton along with grade and staple length.

Fiber strength is an important factor in determining yarn strength. Cottons with good fiber strength usually give less trouble in the manufacturing processes than the weak fibered cottons. Tests for fiber strength were made without a space between the clamp jaws (0 gage) using the Pressley flat bundle tester, and with a 1/8-inch spacer between the clamp jaws (1/8-inch gage) using the Stelometer. Strength results from both the Pressley and the Stelometer were controlled at the same level by use of standard calibration cottons. Use of the Stelometer also provides a measure of fiber elongation. Comparative tests have shown that the results of the 1/8-inch gage tests are more highly correlated with yarn strength than the results of the zero gage tests. Results for both methods are reported, however, because the zero gage tests are widely used by the cotton industry.

The results for the Pressley zero gage test are reported in terms of thousand pounds per square inch, as calculated by the use of Formula 1. These results may be converted to other methods of expressing fiber strength by use of Formulas 2, 3, and 4:

(1) Thousand pounds per square inch (Mpsi) =

$$\frac{\text{breaking load in lb} \times 10.81}{\text{bundle weight in mg}}$$

(2) Grams per tex (gm/tex) = Mpsi x 0.496

(3) Strength-weight ratio = Mpsi ÷ 10.81

(4) Strength-weight ratio = gm/tex ÷ 5.36

The results of the 1/8-inch gage tests are reported in terms of grams per tex in accordance with the recommendations of the American Society for Testing and Materials (ASTM), and the International Standards Organization (ISO). A tex unit is equal to the weight in grams of 1000 meters of the material. There is a correlation between the 1/8-inch gage strength test results and fiber length. Cottons with short lengths tend to have lower average strength values than long staple cottons. Results for 1/8-inch gage tests are calculated by use of Formula 5. Stelometer results are adjusted to Pressley level by use of calibration cottons.

(5) $$\text{Grams per tex} = \frac{\text{breaking load (kg) x 15}}{\text{bundle weight in mg}}$$

The following descriptive terms may be applied to the data shown in this report:

Staple length group and descriptive designation	Zero gage strength (thousand psi)	1/8-inch gage strength (grams per tex)
Short staple:		
Low	70 - 75	18 - 19
Average	76 - 81	20 - 21
High	82 - 87	22 - 23
Medium staple:		
Low	74 - 80	20 - 21
Average	81 - 87	22 - 23
High	88 - 94	24 - 25
Long staple:		
Low	85 - 88	23 - 24
Average	89 - 92	25 - 26
High	93 - 96	27 - 28
Extra-long staple:		
Low	93 - 96	31 - 32
Average	97 - 100	33 - 34
High	101 - 104	35 - 36

Data source - 291 short staple, 1206 medium staple, 78 long staple, and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Fiber elongation results were obtained in connection with the 1/8-inch gage fiber strength tests by using the Stelometer instrument. The following adjective ratings will assist in the interpretation of the fiber elongation results reported:

Descriptive designation	Fiber elongation (percent)
Very low	5.3 and below
Low	5.4 - 6.2
Average	6.3 - 7.1
High	7.2 - 8.0
Very high	8.1 and above

Data source - 1575 American upland lots tested from the crops of 1966 - 68.

Color measurements were made on samples of raw stock from each lot by using the Nickerson-Hunter Colorimeter. The basic color values reported are in terms of grayness and yellowness scales designed especially for cotton. The grayness scale ranges from 0 for the brightest samples (no gray) through 9 for the darkest color. The yellowness scale ranges from 0 for the lightest color (no yellow) to 9 for the yellowest color. In other words, the larger the number reported the darker or yellower the cotton becomes. The relationship of these new cotton color scales to Rd and +b values and to the color of the Universal Grade Standards for upland cotton is shown in Figure 2 and for American Pima cotton in Figure 3.

The color of raw cotton is also reported as a single index number. The relationship of the index number to Rd and +b and the color of the Universal Grade Standards for upland cotton is shown in Figure 4.

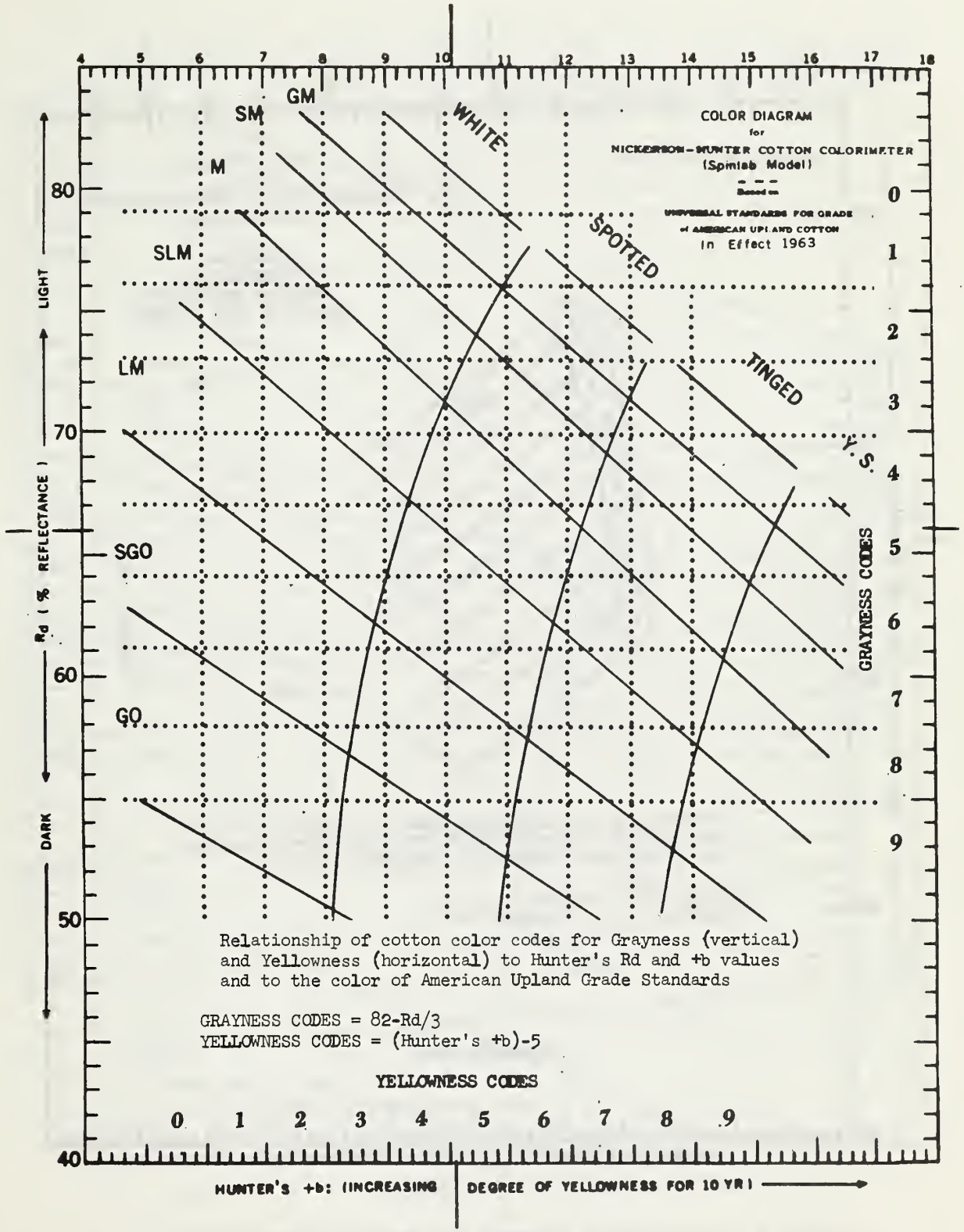
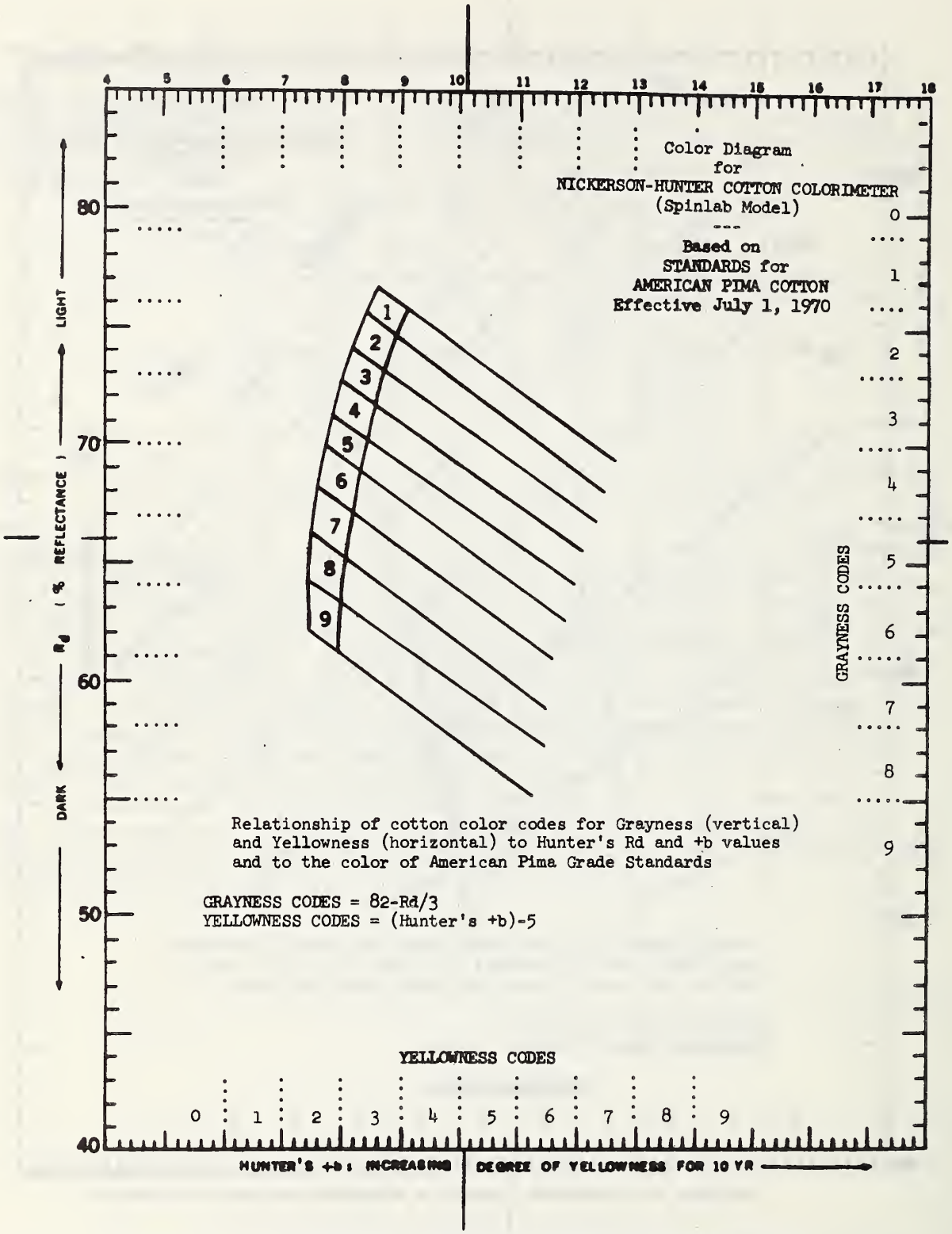


Fig. 2--Colorimeter diagram for upland cotton



Relationship of cotton color codes for Grayness (vertical) and Yellowness (horizontal) to Hunter's Rd and +b values and to the color of American Pima Grade Standards

Figure 3.--Colorimeter diagram for American Pima cotton.

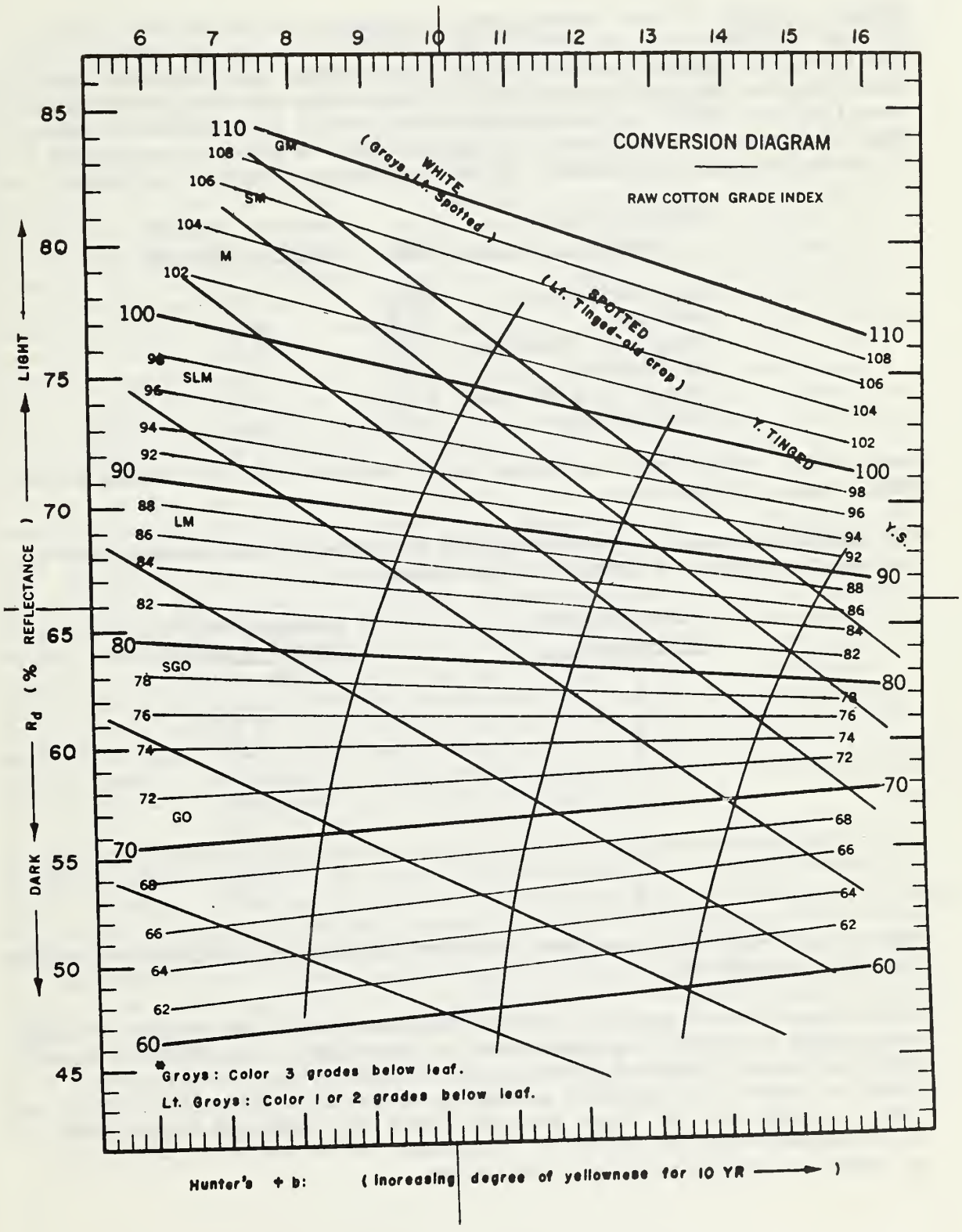


Fig. 4--Conversion diagram for converting raw cotton color to color index

Nonlint content for the various lots was determined by the use of the Shirley Analyzer which separates the lint from the foreign matter. The total nonlint values reported include both visible and invisible loss. These results are distinguished from total picker and card waste in that practically no fiber is included, whereas textile mill wastes include appreciable amounts of fiber. Tests performed in previous years show the following average relationship of Shirley Analyzer nonlint to grade:

American upland grade	Code	Average nonlint content (percent)
Strict Middling	(21)	1.7
Middling	(31)	2.2
Strict Low Middling	(41)	2.9
Low Middling	(51)	3.9
Strict Good Ordinary	(61)	5.3
Good Ordinary	(71)	6.9

Data source - 5725 American Upland Color and Trash Survey samples tested from crops of 1968-72.

The following scale has been developed to represent the average nonlint content for grades of American Pima cotton:

American Pima grade	Average nonlint content (percent)
1	2.0
2	2.3
3	2.6
4	3.3
5	4.1
6	5.3
7	7.0
8	8.5
9	9.9

Data source - 935 American Pima Color and Trash Survey samples tested from the crops of 1968-72.

Differences between results obtained for individual lots and the average percentages shown for the grades may be caused by: (1) Grade is a combination of color, leaf and preparation; any one of which may be the limiting factor, (2) there is a range of trash allowable within each specific grade and (3) these data are based on weight and do not take into consideration the nature of the trash, which may be as important as weight in determining the final grade.

Yarn Processing Tests

The results of yarn processing tests reported in this summary were obtained by procedures adopted in 1962 which include heavier weights for laps, slivers and rovings than those used in previous years. These procedures also include spinning from single roving instead of double roving for the two standard yarn numbers and the spinning of a third yarn number on all the samples to provide a small-scale measure of spinning end-breakage or spinning performance. In 1965, metallic card clothing was installed on the carding machines to replace the conventional fillet clothing used previously, and in 1966, crusher rolls were installed on the card machines. These changes reflect similar changes that have taken place in the cotton textile industry including increased emphasis on running quality since the Mid-1940's when long-draft systems were adopted for both the roving and spinning processes in the routine laboratory spinning test procedures. These changes were designed to bring the laboratory processing procedures more in line with current textile mill practices and thus make the processing evaluations more applicable to present day mill operations.

The card production rate employed and the yarn numbers spun for each cotton were selected on the basis of the staple length expected in the specified area of growth as described in the earlier section on test procedures. Four different length groupings were used to cover the range of cottons grown in this country and to approach commercial practices in processing these cottons. The spinning twist multipliers were selected to provide maximum yarn strength on the basis of staple length. Details of the spinning test procedures are shown at the end of this section of the report (Table 24). Results of previous tests show that decreasing the card production rate results in fewer neps, improved yarn appearance grades, and removal of more waste at the card. Results of tests on the various lots should therefore be compared directly for only those lots in the same length group which were processed in a comparable manner.

Manufacturing waste reported for a sample of cotton is important because excessive waste increases the cost of cotton products. The percentage of waste extracted by the picking and carding processes in performing a spinning test provides a measure of manufacturing waste. There is an average relationship between this waste and grade as discussed in the previous section on the grade of cotton. The rate at which the cotton is carded, however, affects the picker and card waste values because the more thorough carding action obtained when the carding rate is decreased extracts a larger quantity of waste. The longer staple cottons are generally carded at a lower rate than the shorter cottons in order to obtain acceptable yarn quality. Tests performed in recent years show the following average relationship of picker and card waste to grade:

American upland grade	Code	Average picker and card waste (percent)	American Pima	Average picker and card waste (percent)
Strict Middling	(21)	4.7	1	7.5
Middling	(31)	5.1	2	7.9
Strict Low Middling	(41)	5.7	3	8.4
Low Middling	(51)	6.7	4	9.5
Strict Good Ordinary	(61)	7.8	5	10.8
Good Ordinary	(71)	8.9	6	11.7
			7	13.7
			8	15.2
			9	17.5

Data source - 5561 samples of American upland cotton and 431 samples of American Pima cotton tested for Shirley Analyzer nonlint content from the crops of 1966-68 and picker and card waste calculated from its relationship to Shirley Analyzer nonlint content.

The percentage of waste removed by the comber is reported in addition to the picker and card waste for cottons processed into combed yarn. The shorter staple cottons are processed through the comber with a closer setting than for the longer staple cottons because smaller comber waste percentages are usually extracted from this cotton in commercial practice.

Yarn strength is perhaps the most important and reliable test of yarn quality. Yarn strength not only determines the range of usefulness of a given cotton, but is also an indication of spinning and weaving performance. Yarn strength is reported in terms of skein strength since studies have shown that such strength values are more closely related to fabric strength as well as to fiber properties than single strand yarn strength. Skein strength data for the two numbers spun are reported for each lot. There is an average relationship between yarn strength and staple length but it varies for the individual cottons because of differences in other characteristics of the fiber.

The following descriptive terms may be of help in determining the relative level of yarn strength in this report:

Kind of yarn, staple length group and description	Yarn skein strength in pounds for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	265 - 290	78 - 86
Average	291 - 316	87 - 95
High	317 - 342	96 - 104
Medium staple group:	22s	50s
Low	95 - 104	30 - 35
Average	105 - 114	36 - 41
High	115 - 125	42 - 47
Long staple group:	22s	50s
Low	125 - 131	45 - 48
Average	132 - 138	49 - 52
High	139 - 145	53 - 56
Combed yarns:		
Long staple group:	22s	50s
Low	142 - 149	52 - 55
Average	150 - 157	56 - 59
High	158 - 165	60 - 63
Extra-long staple group:	50s	80s
Low	66 - 68	36 - 37
Average	69 - 71	38 - 39
High	72 - 74	40 - 41

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn elongation results were obtained in connection with yarn skein strength tests. Elongation in the yarn is highly correlated with fiber elongation. Yarns with high elongation give less end breakage in weaving than yarns with low elongation.

The following descriptive terms may be of some help in determining the relative levels of yarn elongation:

Kind of yarn, staple length group, and description	Yarn elongation in percent for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	6.5 - 7.3	5.5 - 6.2
Average	7.4 - 8.1	6.3 - 7.0
High	8.2 - 9.0	7.1 - 7.8
Medium staple group:	22s	50s
Low	5.4 - 5.9	4.0 - 4.5
Average	6.0 - 6.5	4.6 - 5.1
High	6.6 - 7.1	5.2 - 5.7
Long staple group:	22s	50s
Low	6.2 - 6.5	5.2 - 5.4
Average	6.6 - 6.9	5.5 - 5.7
High	7.0 - 7.3	5.8 - 6.0
Combed yarns:		
Long staple group:	22s	50s
Low	6.6 - 6.9	5.5 - 5.7
Average	7.0 - 7.3	5.8 - 6.0
High	7.4 - 7.7	6.1 - 6.3
Extra-long staple group:	50s	80s
Low	5.6 - 5.8	4.6 - 4.8
Average	5.9 - 6.1	4.9 - 5.1
High	6.2 - 6.4	5.2 - 5.4

Data source - 291 short staple, 1206 medium staple and 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn Appearance refers to the relative evenness, smoothness and freedom from foreign material of the yarn as evaluated by a visual comparison of the yarn with the latest standards adopted by the American Society for Testing and Materials. Since appearance is very important in many types of cotton products, high yarn appearance grades are desirable. The following descriptive terms may be of help in determining the relative levels of yarn appearance in this report.

Kind of yarn, staple length group, and description	Yarn appearance index for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	105 - 113	92 - 104
Average	114 - 122	105 - 117
High	123 - 130	118 - 130
Medium staple group:	22s	50s
Low	93 - 105	77 - 87
Average	106 - 118	88 - 98
High	119 - 130	99 - 109
Long staple group:	22s	50s
Low	71 - 86	65 - 78
Average	87 - 102	79 - 92
High	103 - 118	93 - 106
Combed yarns:		
Long staple group:	22s	50s
Low	81 - 97	70 - 85
Average	98 - 114	86 - 101
High	115 - 130	102 - 117
Extra-long staple group:	50s	80s
Low	102 - 111	98 - 106
Average	112 - 121	107 - 115
High	122 - 130	116 - 124

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn Appearance Grades

Grade	Index
A	130
B+	120
B	110
C+	100
C	90
D+	80
D	70
Below D	60

Yarn imperfections are reported for the two yarn numbers spun for each lot of cotton. These results were obtained on "Neptel" instruments which electronically count the abrupt changes in the silhouette of the yarn while passing it through a beam of light. They are expressed as the number of imperfections per 50 yards of yarn and are based on the average of 10 determinations. This value is an instrument measure of product quality which is associated with the characteristics of the cotton. It is more highly correlated with fiber properties than either neps in card web or yarn appearance grade. The following descriptive terms may be of help in determining the relative level of yarn imperfections in this report:

Kind of yarn, staple length group, and description	Yarn imperfections for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	6 - 31	6 - 21
Average	32 - 57	22 - 37
High	58 - 83	38 - 53
Medium staple group:	22s	50s
Low	3 - 15	2 - 11
Average	16 - 28	12 - 21
High	29 - 41	22 - 31
Long staple group:	22s	50s
Low	7 - 22	6 - 17
Average	23 - 38	18 - 29
High	39 - 54	30 - 41
Combed yarns:		
Long staple group:	22s	50s
Low	0 - 8	0 - 6
Average	9 - 20	7 - 16
High	21 - 32	17 - 26
Extra-long staple group:	50s	80s
Low	0 - 1	0 - 1
Average	2 - 3	2 - 3
High	4 - 5	4 - 5

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Spinning potential yarn number indicates the finest yarn number that can be spun from a cotton sample without any end-breakage when using specific processing procedures. In performing these tests, new travelers, draft gears, and twist gears are installed for the selected yarn number and it is spun for a 15-minute trial period. The yarn number selected is considered acceptable if there is an end-breakage involving 5 to 15 of the 96 spindles employed during the trial run. If end-breakages occur on less than 5 or more than 15 of the 96 spindles during the trial period, a different yarn number is selected to be spun for another 15-minute trial period until the acceptable end-breakage rate is obtained. The acceptable trial period is also used for a warm-up period which is followed by a 1-hour test period. The spinning potential yarn number is calculated from the deviation of the actual yarn number spun from the desired yarn number and the number of spindles with end-breakages during the 1-hour test run. The following descriptive terms may be of help in determining the relative level of spinning potential yarn numbers in this report:

Spinning Potential (SPY No.)

	Short staple group	Medium staple group	Long staple group
Low	31 - 39	55 - 63	77 - 83
Average	40 - 48	64 - 72	84 - 90
High	49 - 57	73 - 81	91 - 97

Data source - 123 short staple, 688 medium staple and 48 long staple lots of cotton tested from the crops of 1967-68.

Chemical Finishing Tests

Information with respect to the bleaching and dyeing properties of different varieties and growths of cotton is of particular significance to textile manufacturers from the standpoint of providing a basis for avoiding problems that may result from blending different varieties and growths having different dyeing properties. Data with respect to the chemical finishing properties of the principal varieties and growths of cotton as herein reported may thus be used as a basis for selecting cottons of similar finishing properties. Details of the chemical finishing tests are described in Agricultural Information Bulletin No. 167 - "Bleaching, Dyeing, and Mercerizing Test Results on Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1955".

Color measurements of cotton yarn samples were made on a Gardner Automatic Color Difference Meter. These values are reported in terms of Rd and b, two of the three scales on the instrument. The R_d scale measures percentages of diffuse reflectance from 0 to 100. The b scale provides a measure of yellowness in the direction of +b and of blueness in the direction of -b. The degree of either yellowness or blueness increases as the scale numbers increase. These data when plotted with R_d on the vertical ordinate and with

b on the horizontal ordinate are similar to the color values for raw cotton when plotted in relation to the official grade standards as described in the earlier section on color of raw stock.

While the color factors R_d and b are not independent of each other and should be considered together in any overall interpretation, for many purposes it would be convenient in evaluating results to have them in terms of a single number. For raw cotton the grade index provides one way to do this in a straightforward manner. A similar method has been followed in developing conversion formulae and diagrams for each form of cotton measured for color as a part of the chemical finishing studies of the Cotton Division. In each, the index for Middling is held at 100 and that for Good Ordinary is held close to 70. By use of such indices the color measurements of raw stock, gray yarns, bleached yarns, and bleached and dyed yarns may be converted to a single number specification. For details see "Grade and Color Indexes Developed for Evaluating Results of USDA Cotton Finishing Tests", (AMS-245, June 1958).

Table 24--Cotton: Standard machine settings and specifications for processing specified staple length groupings

Process	Staple length groups			
	Short	Medium	Long	Extra long
1. PICKER				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Each test lot is processed through a finisher type picker twice to produce the specified weight of lap.....ounces per yard	14	14	14	11
Type of beater.....	Kirschner	Kirschner	Kirschner	Kirschner
Beater speed.....r.p.m.	1,000	1,000	1,000	1,000
Settings:				
Feed roll to beater.....inches	3/16	3/16	3/16	3/8
Grids to beater, top.....inches	5/16	5/16	5/16	9/16
Grids to beater, bottom.....inches	11/16	11/16	11/16	11/16
2. CARD				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Picker lap fed.....ounces per yard	14	14	14	11
Sliver delivered.....grains per yard	50	50	50	40
Production rate.....pounds per hour	12-1/2	9-1/2	6-1/2	4-1/2
Doffer speed.....r.p.m.	11	8	6	4
Cylinder speed.....r.p.m.	165	165	165	165
Flat speed.....inches per minute	2-7/8	2-7/8	2-7/8	2-7/8
Licker-in speed.....r.p.m.	435	435	435	435
Clothing:				
Cylinder, Hollingsworth metallic.....number	35	35	25	25
Doffer, Hollingsworth metallic.....number	29	29	29	29
Flats, Fillet.....number	110	110	130	130
Settings:				
Feed plate to licker-in.....inches	0.010	0.010	0.010	0.017
Mote knife to licker-in, top.....inches	.012	.012	.012	.012
Mote knife to licker-in, bottom.....inches	.010	.010	.010	.010
Licker-in screen, front.....inches	.029	.029	.029	.029
Licker-in screen, back.....inches	.017	.017	.017	.017
Licker-in to cylinder.....inches	.007	.007	.007	.007
Flats to cylinder, back, center, and front...inches	.009	.009	.009	.009
Back plate to cylinder, top.....inches	.029	.029	.029	.029
Back plate to cylinder, bottom.....inches	.034	.034	.034	.034
Front plate to cylinder, top.....inches	.029	.029	.029	.029
Front plate to cylinder, bottom.....inches	.034	.034	.034	.034
Doffer to cylinder.....inches	.007	.007	.007	.007
Cylinder screen, back.....inches	.029	.029	.029	.029
Cylinder screen, center.....inches	.034	.034	.034	.034
Cylinder screen, front.....inches	3/16	3/16	3/16	3/16
Doffer comb to doffer.....inches	.022	.022	.022	.022
Crusher rolls pressure.....pounds	281	281	281	281
3. SLIVER LAPPER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Sliver fed, 20 each.....grains per yard	--	--	50	40
Lap delivered.....grains per yard	--	--	595	525
Speed.....yards per minute	--	--	46	46
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	5/16	5/16
Second to third.....inches plus fiber length 1/	--	--	9/16	9/16

1/ Allowances listed are in addition to fiber lengths in terms of "pulls" made on card sliver. These pulls are estimated from Fibrograph length tests except for extra long staple cottons.

Table 24--Cotton: Standard machine settings and specifications for processing specified staple length groupings--Continued

Process	Staple length groups			
	Short	Medium	Long	Extra long
4. RIBBON LAPPER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 4.....grains per yard	--	--	595	525
Laps delivered.....grains per yard	--	--	610	610
Speed.....yards per minute	--	--	47	47
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	4/16	4/16
Second to third.....inches plus fiber length 1/	--	--	7/16	7/16
Third to fourth.....inches plus fiber length 1/	--	--	10/16	10/16
5. COMBER (Model D-4)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 8 each.....grains per yard	--	--	610	610
Sliver delivered.....grains per yard	--	--	50	40
Production per hour.....pounds	--	--	16	13
Setting of cushion plate to detaching roll.....inches	--	--	.48	.54
Nominal waste.....percent	--	--	16 to 17	16 to 17
6. DRAWING FRAME (synthetic top rolls)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
First process:				
Sliver fed, 6 each.....grains per yard	50	50	50	40
Sliver delivered.....grains per yard	60	53	53	42
Second process:				
Sliver fed, 6 each.....grains per yard	60	53	53	42
Sliver delivered.....grains per yard	70	55	55	44
Speed.....yards per minute	36	36	36	36
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	4/16	4/16	4/16	4/16
Second to third.....inches plus fiber length 1/	7/16	7/16	7/16	7/16
Third to fourth.....inches plus fiber length 1/	10/16	10/16	10/16	10/16
7. LONG DRAFT ROVING (8 x 4, 2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Sliver fed.....grains per yard	70	55	55	44
Roving delivered.....hank	1.10	1.80	1.80	4.25
Spindle speed.....r.p.m.	1235	1235	1235	1235
Roll settings (center to center):				
First to second, standard.....inches	2-1/4	2-1/4	2-1/4	2-1/4
Third to fourth.....inches plus fiber length 1/	1/4	1/4	1/4	1/4
8. LONG DRAFT SPINNING (2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	65	65	65	65
Roving fed single.....hank	1.10	1.80	1.80	4.25
Twist multiplier.....number	4.4	4.0	3.8	3.6
Carded yarns.....number 2/	8s & 22s	22s & 50s	22s & 50s	--
Combed yarns.....number	--	--	22s & 50s	50s & 80s
Spindle speed.....r.p.m. 3/	9000	9000	9000	9000
Roll settings (center to center):				
First to second, standard.....inches	2-1/16	2-1/16	2-1/16	2-1/16
Second to third, standard.....inches	1-3/4	1-3/4	1-3/4	1-3/4

2/ Additional yarn is spun on a 96 spindle wide gage frame at 9,000 r.p.m. spindle speed to determine the spinning potential yarn number or the finest yarn number that can be spun without end-breakage.

3/ All standard yarn numbers are spun on narrow gage frames with spindle speeds of 9,000 r.p.m. except for 8s, which are spun on a wide gage frame with spindle speed of 5,500 r.p.m.